Department of Veteran Affairs Standards Profile

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Version 1.2

Department of Veteran Affairs
Standards Profile

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1. Introduction

The VA Standards Profile and Best Practices Reference, along with the Technical Reference Model (TRM), is intended to form a knowledge-base to provide a common conceptual framework, and define a common vocabulary and a set of services and interfaces that are, or will be, common to VA systems. This will enable the diverse components within VA to better coordinate acquisition, development, and interoperability, and accomplish the goals set forth in the One-VA Enterprise Architecture. The TRM and Standards Profile are a source of knowledge from which project managers and developers can obtain useful information about the standards, techniques and technologies that are approved for use or are currently applied at VA. In addition to the typical discussion of IT services, functions and associated standards, found in most TRMs, the VA TRM attempts, where possible, to develop integrated views across orthogonal IT disciplines, so that project managers may integrate many technologies in order to deliver a complete solution to satisfy a VA business requirement.

The TRM and Standards Profile web site is also a tool for the dissemination of technical information across the widely disbursed VA IT community. It is intended to promote integration and interoperability within the VA information technology infrastructure, to facilitate component reuse, to share lessons learned, and to help accelerate development efforts.

The Standards Profile component of the TRM Web site is accessible on the VA intranet. In its Web-enabled form, the TRM provides a vehicle for soliciting reviews and comments on proposed standards and best practices from the vast VA technical community. The TRM is intended to function, in general usage, as a paperless system.

A Standards Profile hardcopy is produced on a semi-annual basis. The hardcopy is not published for wide dissemination; it provides only a limited subset of the information and functionality available from the Web site.

The VA TRM, Standards Profile and Best Practices Reference are the collaborative product, of the VA IT and Business Communities, developed within the Enterprise Architecture governance process. These documents reflect the Departments agreement on the standards to be used in building and acquiring information systems and they will evolve with changes in technology and VA business objectives.

1.1 Background

The Clinger-Cohen Act of 1996 (Public Law 104-106) assigns the Chief Information Officer (CIO) with the responsibility to develop, maintain and facilitate the implementation of an information technology architecture. The Department of Veteran Affairs has embarked on this challenge to deliver a One-VA enterprise architecture, through the auspices of the Information Technology Board (ITB) and the Enterprise Architecture Council (EAC). The members of the ITB and EAC are VA business and

technology managers, who have been charged with the development and definition of the enterprise architecture. A key component of the enterprise architecture is the Standards Profile.

The Standards Profile and its supporting Technical Reference Model (TRM) form an integral component of the One-VA Enterprise Architecture that is required by the Office of Management and Budget (OMB) as part of a Federal Information Technology Architecture (OMB M-97-16). The purpose of the Standards Profile is to provide a comprehensive inventory of standards, along with guidance on which standards are preferred for use in VA and which standards best integrate in to the VA enterprise architecture. With this information, project developers will craft the application and infrastructure alternatives and specifications needed to define their projects. Developing and acquiring information assets in this way will enhance possibility of system interoperability and data and process reusability across the Department. Adhering to a common set of standards across VA Headquarters, the three Administrations and their two hundred major facilities and hundreds of remote facilities, is central to the One-VA Enterprise Architecture.

The VA Standards profile is rooted in the concept of an open systems environment and, through its application, supports portable, scalable, and interoperable applications through standard services, interfaces, data formats, and protocols. In areas where open system standards have matured, the VA Standards Profile will specify open system solutions; in areas where open system standards have not developed, the Standards Profile will identify dominant proprietary solutions, until such time that open system standards become viable.

The OMB Memorandum of June 1997, concerning IT architectures calls for a technical reference model and a standards profile.

> "The Technical Reference Model identifies and describes the information services used throughout the agency.... The standards profile defines a set of IT standards that supports the services articulated in the Technical Reference Model; they are the cornerstone of interoperability... Together with the Technical Reference Model, the Standards Profile enables the development and acquisition of standardized systems to cost effectively meet the business needs of the agency."

1.2 Scope

The VA Standards Profile is intended to be applied to all VA information systems and information technology applications at all VA organizational levels and environments. The VA Standards Profile provides insight and guidance in the development of technical and system architectures that satisfy requirements across missions, and in particular where interoperability, reuse, and open systems are desirable. The Standards Profile guides the selection of standards for interfaces, services and products in support of the VA Enterprise Architecture. The scope of the VA Standards Profile is sufficiently broad to assist in addressing a wide range of problems and system configurations.

Exceptions to this policy may be granted, by waiver, after the project sponsor has obtained the approval of the VA Chief Information Officer. The waiver request must present compelling business and technical arguments for consideration by the VA CIO.

1.3 Purpose

The purpose of the VA Standards profile is to identify the set of approved information technology standards, industry best practices and implementation models that define the VA target environment for the acquisition, development, integration, deployment and support of information systems and infrastructure at the Department of Veteran Affairs. This knowledge is essential to facilitate the development of interoperability, reusability, information sharing and thereby to improve service to veterans and enhance accountability and efficiency in the use of IT resources.

This Standards Profile is also intended to communicate and inform Information Technology Managers of the technologies, configurations and standards in use or emerging within VA and to provide additional sources for reference.

1.4 Goals

Establishing and communicating a comprehensive set of approved standards and best practices, consistently applied across the VA enterprise, will enable VA to

- Promote vendor independence through the use of standards based products and interchangeable components;
- Improve operational productivity through the use of consistent interfaces;
- Improve interoperability, system reuse and information sharing across business units and administrations;
- Improve compliance with security requirements;
- Improve development efficiency; and
- Improve scalability.

1.5 Audience

This document is intended for use by information technology managers, project sponsors, information architects, developers and their supporting contractors.

It will provide guidance in:

- Understanding the existing and emerging VA IT infrastructure and application development environment; and in
- Acquiring, developing and deploying systems that are consistent with that infrastructure and environment.

1.6 Approach

The VA Standards Profile consists of Industry and local VA standards and best practices, which have been adopted for VA use through the enterprise architecture governance process. This process calls for review and recommendation by the Enterprise Architecture Council (EAC) after publication and comment across the entire VA community. The recommendations of the EAC are then presented for approved and adoption to the Information Technology Board (ITB). The fundamental constructs upon which this Standards Profile has been developed are a series of widely accepted, complementary models that are central to contemporary IT system development:

- The System Development Lifecycle Model;
- The IEEE Open System Environment (OSE) reference model;
- The Open Systems Interconnection (OSI) Seven Layer Reference Model; and
- The Three-Tiered Architecture Model for application design.

2. Standards Profile Overview

2.1 Standards Profile and EA Knowledge Base Implementation

The VA Standards Profile and Technical Reference Model are intended to provide a rich variety of views into the standards set, design conventions and best practices implemented or advocated at VA. These views are intended to support the needs of the project designers, developers and managers involved in IT infrastructure development.

Figure 1 depicts the relationship between the EA Knowledge Base elements and their supporting processes.

The three-part EA knowledge base, consisting of the Technical Reference Model, the Standards Profile and the Best Practices Compendium, is shown without background coloring. The three-column configuration in the TRM view is analogous to the organization of the TRM web site in which:

- The left column organizes general background information;
- The center column consists of detailed views, in the form of a service and function taxonomy; and
- The right column consists of integrated views which cross function and service boundaries to address the requirements of typical IT development projects.

The **gray** schematic illustrates the initial seeding of the knowledge base from predecessor TRMs developed by VA and other departments. This process calls for development of a TRM recommendation by the Enterprise Architecture Council for approval by the Information Technology Board.

The **green** schematic illustrates the ad-hoc process of project developers referring to the TRM, standards profile and best practices compendium. Over the course of the project's development lifecycle, developers will also contribute to the best practices portion off the knowledge base.

The **yellow** schematic illustrates a semi-annual technical refresh process, which will be the source of technology infusion and technology retirement. At the end of this semi-annual cycle, every standard in the standards profile is assessed as either emerging, mature, retiring, or obsolete. This process is driven by two input sources:

- An independent industry technology assessment, which is used to identifies every standard in the standards profile as either emerging, mature, retiring, or obsolete; and
- A VA business assessment which inserts the consequences of business and policy determinations into the TRM.

The process illustrated in **blue** is an ongoing content management task, performed by the Office of the Chief Architect to maintain the knowledge base and web site. Through this process:

- The web site documents are updated whenever a significant content change occurs; and
- The hardcopy synopsis is updated semi-annually, in conjunction with adopting changes from the technology refreshment process.
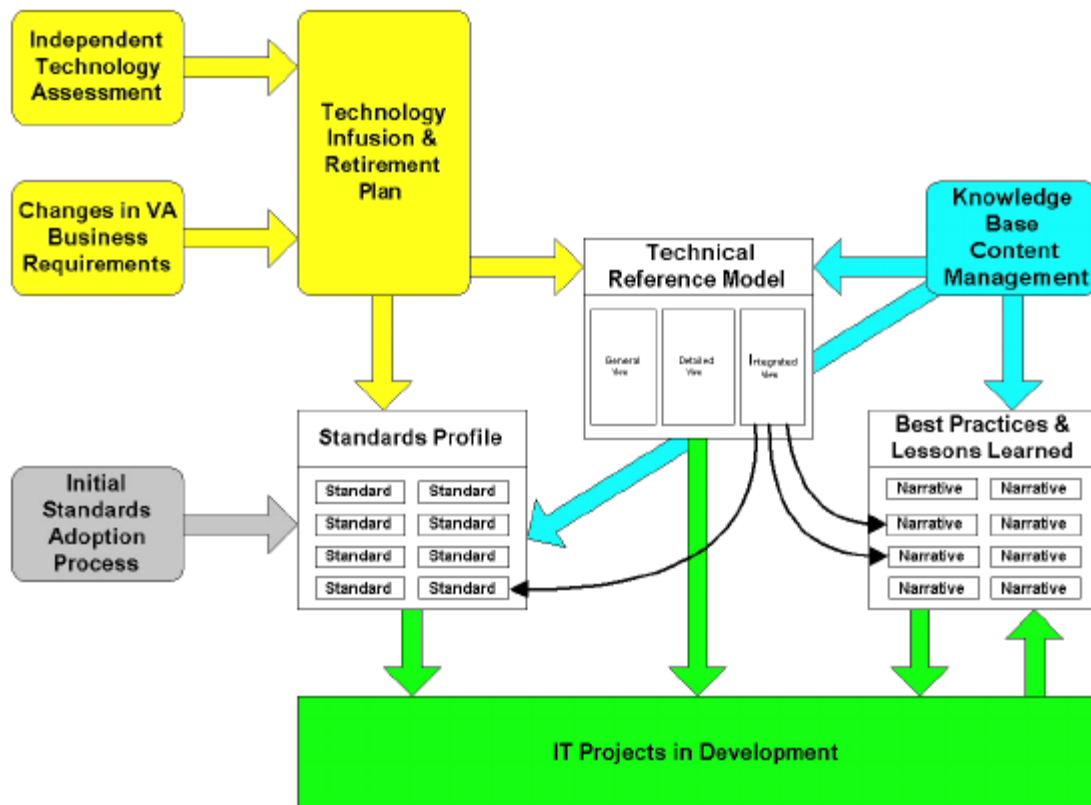
Figure 1: Relationship of EA Implementation Knowledge Base Components

2.1.1 Standards Submission and Adoption Process

Proposed standards may be submitted to the VA Chief Information Officer by any interested party for review and for consideration of adoption by VA. The standards adoption procedure is derived from the VA IT governance process.

The proposed standard is reviewed by the Enterprise Architecture Council and then forwarded, with recommendations, to the Information Technology Board, for possible adoption.

2.1.2 Standards Compliance and Waiver Policy

Project sponsors and designers are required to adhere to the applicable standards, policies and mandatory best practices, established by the Information Technology Board, when proposing and developing IT initiatives within VA.

Exceptions to this policy may be granted, by waiver, after the project sponsor has obtained the approval of the VA Chief Information Officer. The waiver request must present compelling business and technical arguments for consideration by the VA CIO.

2.1.3 Technology Refresh Process

Changes to the TRM and standards profile are posted, as they occur, to the VA Intranet. The hardcopy version of the TRM and the standards profile are published semi-annually, from the material maintained in the Intranet publication.

VA standards are formally reviewed in conjunction with a semi-annual independent industry technical assessment and a semi-annual business requirement review; these reviews are evaluated by the Enterprise Architecture Council, for consideration and adoption by the Information Technology Board. Changes resulting from this Technology Refresh Process are then published in the Intranet and hardcopy versions of the TRM.

2.2 Standards profile and TRM Structure

2.2.1 Standards Profile View

The VA Standards Profile may be viewed directly by Standard Number within Standards Organization. Abstracts of each standard are maintained within the VA EA Implementation Knowledge Base, along with links to the actual standards text on the standards organization's web site. Standards may also be viewed from various links within the TRM.

2.2.2 Best Practices Compendium View

Best Practices may be derived from industry sources or may be internal to VA. VA's Best Practices may be viewed directly, in the sequence of adoption by VA, or they may be viewed through links within the TRM.

2.2.3 Service and Function Taxonomy View

The TRM decomposes all IT functions and services into a detailed taxonomy based on the IEEE Open System Environment (OSE) Model. This taxonomy appears in the center column on the TRM web site and in the table of contents of the hardcopy document. Function and service entries provide links to the related abstracts for each function and service, which, in turn, provides a link to each related standard.

2.2.4 Integrated Project Development Views

The TRM also supports a series of integrated views, which cut across technical disciplines, to illustrate typical configurations and planning issues that must be addressed for the development of various system configurations.

2.3 Standards Profile Document Management

The VA Standards Profile document is available on the VA TRM Intranet web site. This web site will be updated on an ad-hoc basis, as significant changes occur, throughout the year.

The hardcopy version of the VA Standards Profile is a synopsized version of the web site. The hardcopy is revised semi-annually, in conjunction with adoption of changes from the semi-annual TRM technology assessment process.

The VA Standards profile knowledge base is designed to be a paperless process, with the hardcopy produced in very limited distribution to satisfy oversight, review and audit requirements.

3. Summary of VA Standards

3.1 Application of Commercial Standards in the Federal Government

Pursuant to OMB Circular A119, federal government agencies are required to use voluntary standards for regulatory and procurement purposes when appropriate. The VA Standards Profile identifies the government, industry, and de facto standards that VA organizations will use as guides for acquiring commercial off-the-shelf (COTS) information technology products. The Standards Profile uses widely supported federal and industry standards to promote open systems solutions and to facilitate extending the architecture to emerging technologies and products. The standards selected for inclusion in the VA Standards Profile are from national, international, or federal standard organizations. These include sources such as the American National Standards Institute (ANSI), Federal Information Processing Standards (FIPS), the International Standards Organization (ISO), the Institute of Electrical and Electronics Engineers (IEEE), the International Telecommunications Union (ITU), and the Internet Engineering Task Force (IETF).

One of the primary objectives of the VA Enterprise Architecture is interoperability. The Standards Profile reflects VA's view of the standards to be used in building interoperable systems. To be included in the VA Standards Profile, a standard must address a common service that affects, or is affected by, one organization's ability to interact electronically with another. As a result, most selected standards in the profile are related to common communication and document exchange services, although other services are not precluded. Through the consistent use of standards, VA will be in a better position to make use of current and emerging technology, and be able to promote interoperability using a common IT framework.

It is VA's intention to use commercial open standards to guide selection of COTS products for use throughout the enterprise, and to guide any required GOTS development. In those situations where commercial standards are not sufficiently mature to guide COTS selection, VA will select products to ensure standardization and interoperability.

3.2 Applicable Standards Organizations

There are a number of standards organizations that create and publish standards that impact the VA EA. The major organizations from which this Standards Profile is derived are as follows:

- American National Standards Institute (ANSI) – ANSI is a voluntary standardization organization whose purpose is to administer and coordinate standardization efforts in the private sector.
- National Institute of Standards (NIST) – NIST, publisher of the Federal Information Processing Standards (FIPS), was formed under the Information Technology Management Reform Act (Public Law 104-106) and authorizes the

> Secretary of Commerce to approve standards and guidelines for Federal computer systems.

- IEEE Standards for Computer Engineering – IEEE is a non-profit, technical professional association of more than 377,000 individual members in 150 countries. The IEEE organization publishes a number of standards in a number of technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics.
- Internet Engineering Task Force (IETF) – The IETF is a large open international community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet. It publishes standards that are related to the Internet, its use, and development of applications for the Internet.
- International Standards Organization (ISO) – ISO is a worldwide federation of national standards bodies from some 140 countries, whose mission is to promote the international development of standardization and related activities with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. ISO's work results in international agreements, which are published as international standards.
- International Telecommunications Union (ITU) – The ITU is an intergovernmental organization, within which the public and private sectors cooperate for the development of telecommunications. The ITU adopts international regulations and treaties governing all terrestrial and space uses of the frequency spectrum as well as the use of the geo-stationary satellite orbit, within which countries adopt their national legislation. It also develops standards to facilitate the interconnection of telecommunication systems on a worldwide scale regardless of the type of technology used.
- World Wide Web Consortium (W3C) – The W3C's purpose is to develop interoperable technologies (standards, specifications, guidelines, software, and tools) for the Internet.

The following subsections present the standards selected for the VA, and are grouped according to the standards organization from which they came.

3.3 Standards Applicable to VA, by Standards Organization

The following standards constitute the standards profile for the VA EA. Selection and procurement of COTS products across VA are to be guided by these standards, as is the development of GOTS components.

3.3.1 American National Standards Institute (ANSI)

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1	ISO/IEC 7498-1:1994	Information technology -- Open Systems Interconnection -- Basic Reference Model: The Basic Model	ISO/IEC 7498-1:1994
Communications Services	JTC1	ISO/IEC 7498-4:1989	Information processing systems -- Open Systems Interconnection -- Basic Reference Model -- Part 4: Management framework	ISO/IEC 7498-4:1989
Communications Services	JTC1/SC06	ISO/IEC 8072:1996	Information technology -- Open systems interconnection -- Transport service definition	ISO/IEC 8072:1996
Communications Services	JTC1/SC06	ISO/IEC 8073:1997	Information technology -- Open Systems Interconnection -- Protocol for providing the connection-mode transport service	ISO/IEC 8073:1997
Communications Services	JTC1/SC06	ISO/IEC 8073:1997/ Amd.1:1998 (E)	Amendment 1: Relaxation of class conformance requirements and expedited data service feature negotiation	ISO/IEC 8073:1997/ Amd.1:1998 (E)
Communications Services	JTC1/SC06	ISO/IEC 8208:2000	Information technology -- Data communications -- X.25 Packet Layer Protocol for Data Terminal Equipment	ISO/IEC 8208:2000
Communications Services	JTC1/SC06	ISO/IEC 8348:1996	Information technology -- Open Systems Interconnection -- Network Service Definition	ISO/IEC 8348:1996
Communications Services	JTC1/SC06	ISO/IEC 8348:1996/ Amd.1:1998	Amendment 1: Addition of the Internet protocol address format identifier	ISO/IEC 8348:1996/ Amd.1:1998
Communications Services	JTC1/SC06	ISO/IEC 8473-1:1998	Information technology -- Protocol for providing the connectionless-mode network service: Protocol specification	ISO/IEC 8473-1:1998
Communications Services	JTC1/SC06	ISO/IEC 8473-2:1996	Information technology -- Protocol for providing the connectionless-mode network service -- Part 2: Provision of the underlying service by an ISO/IEC 8802 subnetwork	ISO/IEC 8473-2:1996
Communications Services	JTC1/SC06	ISO/IEC 8473-3:1995	Information technology -- Protocol for providing the connectionless-mode network service: Provision of the underlying service by an X.25 subnetwork	ISO/IEC 8473-3:1995
Communications Services	JTC1/SC06	ISO/IEC 8473-4:1995	Information technology -- Protocol for providing the connectionless-mode network service: Provision of the underlying service by a subnetwork that provides the OSI data link service	ISO/IEC 8473-4:1995

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 8473-5:1997	Information technology -- Protocol for providing the connectionless-mode network service: Provision of the underlying service by ISDN circuit-switched B-channels	ISO/IEC 8473-5:1997
Communications Services	JTC1/SC06	ISO/IEC 8602:1995	Information technology -- Protocol for providing the OSI connectionless-mode transport service	ISO/IEC 8602:1995
Communications Services	JTC1/SC06	ISO/IEC 8602:1995/ Amd.1:1996	Amendment 1: Addition of connectionless-mode multicast capability	ISO/IEC 8602:1995/ Amd.1:1996
Communications Services	JTC1/SC06	ISO/IEC 8878:1992	Information technology -- Telecommunications and information exchange between systems -- Use of X.25 to provide the OSI Connection-mode Network Service	ISO/IEC 8878:1992
Communications Services	JTC1/SC06	ISO/IEC 8878:1992/ Cor.1:1993	Technical Corrigendum 1	ISO/IEC 8878:1992/ Cor.1:1993
Communications Services	JTC1/SC06	ISO/IEC 8878:1992/ Cor.2:1993	Technical Corrigendum 2	ISO/IEC 8878:1992/ Cor.2:1993
Communications Services	JTC1/SC06	ISO/IEC 8878:1992/ Cor.3:1996	Technical Corrigendum 3	ISO/IEC 8878:1992/ Cor.3:1996
Communications Services	JTC1/SC06	ISO/IEC 9542:1988	Information processing systems -- Telecommunications and information exchange between systems -- End system to Intermediate system routing exchange protocol for use in conjunction with the Protocol for providing the connectionless-mode network service (ISO 8473)	ISO/IEC 9542:1988
Communications Services	JTC1/SC06	ISO/IEC TR 9577:1999	Information technology -- Protocol identification in the network layer	ISO/IEC TR 9577:1999
Communications Services	JTC1/SC06	ISO/IEC 10589:1992	Information technology -- Telecommunications and information exchange between systems -- Intermediate system to Intermediate system intra-domain routing information exchange protocol for use in conjunction with the protocol for providing the connectionless-mode Network Service (ISO 8473)	ISO/IEC 10589:1992
Communications Services	JTC1/SC06	ISO/IEC 10589:1992/ Cor.1:1993	Technical Corrigendum 1	ISO/IEC 10589:1992/ Cor.1:1993
Communications Services	JTC1//SC06	ISO/IEC 10589:1992/ Cor.2:1996	Technical Corrigendum 2	ISO/IEC 10589:1992/ Cor.2:1996

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 10589:1992/ Cor.3:1996	Technical Corrigendum 3	ISO/IEC 10589:1992/ Cor.3:1996
Communications Services	JTC1/SC06	ISO/IEC 10589:1992/ Amd.1:1996	Amendment 1: Implementation conformance statement proformas	ISO/IEC 10589:1992/ Amd.1:1996
Communications Services	JTC1/SC06	ISO/IEC 11571:1998	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Networks -- Addressing	ISO/IEC 11571:1998
Communications Services	JTC1/SC06	ISO/IEC 11572:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Circuit mode bearer services -- Inter-exchange signaling procedures and protocol	ISO/IEC 11572:2000
Communications Services	JTC1/SC06	ISO/IEC 11574:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Circuit-mode 64 kbit/s bearer services -- Service description, functional capabilities and information flows	ISO/IEC 11574:2000
Communications Services	JTC1/SC06	ISO/IEC 11579-1:1994	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Part 1: Reference configuration for PISN Exchanges (PINX)	ISO/IEC 11579-1:1994
Communications Services	JTC1/SC06	ISO/IEC 11579-1:1994/Cor 1:1996	Technical Corrigendum 1	ISO/IEC 11579-1:1994/Cor 1:1996
Communications Services	JTC1/SC06	ISO/IEC 11579-3:1999	Information technology -- Private Integrated Services Network -- Part 3: Reference configuration for PINX extension lines	ISO/IEC 11579-3:1999
Communications Services	JTC1/SC06	ISO/IEC 11582:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Generic functional protocol for the support of supplementary services -- Inter-exchange signaling procedures and protocol	ISO/IEC 11582:1995
Communications Services	JTC1/SC06	ISO/IEC 11582:1995/Cor 1:1999	Technical Corrigendum 1	ISO/IEC 11582:1995/Cor 1:1999
Communications Services	JTC1/SC06	ISO/IEC 11582:1995/Cor 2:2000	Technical Corrigendum 2	ISO/IEC 11582:1995/Cor 2:2000

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 13246:1997	Information technology -- Telecommunications and information exchange between systems -- Broadband Private Integrated Services Network -- Inter-exchange signaling protocol -- Signaling ATM adaptation layer	ISO/IEC 13246:1997
Communications Services	JTC1/SC06	ISO/IEC 13247:1997	Information technology -- Telecommunications and information exchange between systems -- Broadband Private Integrated Services Network -- Inter-exchange signaling protocol -- Basic call/connection control	ISO/IEC 13247:1997
Communications Services	JTC1/SC06	ISO/IEC 13863:1998	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Path replacement additional network feature	ISO/IEC 13863:1998
Communications Services	JTC1/SC06	ISO/IEC 13864:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Name identification supplementary services	ISO/IEC 13864:1995
Communications Services	JTC1/SC06	ISO/IEC 13865:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call completion supplementary services	ISO/IEC 13865:1995
Communications Services	JTC1/SC06	ISO/IEC 13866:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call completion supplementary services	ISO/IEC 13866:1995
Communications Services	JTC1/SC06	ISO/IEC 13868:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Name identification supplementary services	ISO/IEC 13868:1995
Communications Services	JTC1/SC06	ISO/IEC 13868:1995/Amd 1:2001	Amendment 1: Additional character sets for European languages	ISO/IEC 13868:1995/Amd 1:2001

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 13869:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call transfer supplementary service	ISO/IEC 13869:1995
Communications Services	JTC1/SC06	ISO/IEC 13869:1995/Cor 1:1999	Technical Corrigendum 1	ISO/IEC 13869:1995/Cor 1:1999
Communications Services	JTC1/SC06	ISO/IEC 13870:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call completion supplementary services	ISO/IEC 13870:2001
Communications Services	JTC1/SC06	ISO/IEC 13872:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call diversion supplementary services	ISO/IEC 13872:1995
Communications Services	JTC1/SC06	ISO/IEC 13873:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call diversion supplementary service	ISO/IEC 13873:1995
Communications Services	JTC1/SC06	ISO/IEC 13873:1995/Cor 1:1999	Technical Corrigendum 1	ISO/IEC 13873:1995/Cor 1:1999
Communications Services	JTC1/SC06	ISO/IEC 13874:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Path replacement additional network feature	ISO/IEC 13874:1999
Communications Services	JTC1/SC06	ISO/IEC 14136:1995	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Identification supplementary services	ISO/IEC 14136:1995
Communications Services	JTC1/SC06	ISO/IEC 14474:1998	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Functional requirements for static circuit-mode inter-PINX connections	ISO/IEC 14474:1998

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC TR 14475:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Architecture and scenarios for Private Integrated Services Networking	ISO/IEC TR 14475:2001
Communications Services	JTC1/SC06	ISO/IEC 14841:1996	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call offer supplementary service	ISO/IEC 14841:1996
Communications Services	JTC1/SC06	ISO/IEC 14842:1996	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Do not disturb and do not disturb override supplementary services	ISO/IEC 14842:1996
Communications Services	JTC1/SC06	ISO/IEC 14843:1996	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call offer supplementary service	ISO/IEC 14843:1996
Communications Services	JTC1/SC06	ISO/IEC 14844:1996	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Do not disturb and do not disturb override supplementary services	ISO/IEC 14844:1996
Communications Services	JTC1/SC06	ISO/IEC 14845:1996	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call intrusion supplementary service	ISO/IEC 14845:1996
Communications Services	JTC1/SC06	ISO/IEC 14846:1996	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call intrusion supplementary service	ISO/IEC 14846:1996
Communications Services	JTC1/SC06	ISO/IEC 15049:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Advice of charge supplementary services	ISO/IEC 15049:1997

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 15050:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Advice of charge supplementary services	ISO/IEC 15050:1997
Communications Services	JTC1/SC06	ISO/IEC 15051:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Recall supplementary service	ISO/IEC 15051:1997
Communications Services	JTC1/SC06	ISO/IEC 15052:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Recall supplementary service	ISO/IEC 15052:1997
Communications Services	JTC1/SC06	ISO/IEC 15052:1997/Cor 1:2002	Technical Corrigendum 1	ISO/IEC 15052:1997/Cor 1:2002
Communications Services	JTC1/SC06	ISO/IEC 15053:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call interception additional network feature	ISO/IEC 15053:1997
Communications Services	JTC1/SC06	ISO/IEC 15054:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call interception additional network feature	ISO/IEC 15054:1997
Communications Services	JTC1/SC06	ISO/IEC 15055:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Transit counter additional network feature	ISO/IEC 15055:1997
Communications Services	JTC1/SC06	ISO/IEC 15056:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Transit counter additional network feature	ISO/IEC 15056:1997

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 15428:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Wireless Terminal Location Registration supplementary service and Wireless Terminal Information Exchange additional network feature	ISO/IEC 15428:1999
Communications Services	JTC1/SC06	ISO/IEC 15429:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Wireless Terminal Location Registration supplementary service and Wireless Terminal Information exchange additional network feature	ISO/IEC 15429:1999
Communications Services	JTC1/SC06	ISO/IEC 15430:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Wireless terminal call handling additional network features	ISO/IEC 15430:1999
Communications Services	JTC1/SC06	ISO/IEC 15431:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Wireless terminal call handling additional network features	ISO/IEC 15431:1999
Communications Services	JTC1/SC06	ISO/IEC 15432:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Wireless Terminal Authentication supplementary services (WTAT and WTAN)	ISO/IEC 15432:1999
Communications Services	JTC1/SC06	ISO/IEC 15433:1999	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Wireless Terminal Authentication supplementary services	ISO/IEC 15433:1999

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 15505:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network (PISN) -- Specification, Functional Model and Information Flows -- Message Waiting Indication Supplementary Service	ISO/IEC 15505:2000
Communications Services	JTC1/SC06	ISO/IEC 15506:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network (PISN) -- Inter-Exchange Signaling Protocol -- Message Waiting Indication Supplementary Service	ISO/IEC 15506:2000
Communications Services	JTC1/SC06	ISO/IEC 15506:2000/Cor 1:2000	Technical Corrigendum 1	ISO/IEC 15506:2000/Cor 1:2000
Communications Services	JTC1/SC06	ISO/IEC 15507:1997	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- PINX clock synchronization	ISO/IEC 15507:1997
Communications Services	JTC1/SC06	ISO/IEC 15771:1998	Information technology --Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Common information additional network feature	ISO/IEC 15771:1998
Communications Services	JTC1/SC06	ISO/IEC 15772:1998	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Common information additional network feature	ISO/IEC 15772:1998
Communications Services	JTC1/SC06	ISO/IEC 15772:1998/Cor 1:2000	Technical Corrigendum 1	ISO/IEC 15772:1998/Cor 1:2000
Communications Services	JTC1/SC06	ISO/IEC 15773:1998	Information technology -- Telecommunications and information exchange between systems -- Broadband Private Integrated Services Network -- Inter-exchange signaling protocol -- Transit counter additional network feature	ISO/IEC 15773:1998
Communications Services	JTC1/SC06	ISO/IEC 15899:1998	Information technology -- Telecommunications and information exchange between systems -- Broadband Private Integrated Services Network -- Service description -- Broadband connection oriented bearer services	ISO/IEC 15899:1998

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 15991:1998	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call priority interruption and call priority interruption protection supplementary services	ISO/IEC 15991:1998
Communications Services	JTC1/SC06	ISO/IEC 15992:1998	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call priority interruption and call priority interruption protection supplementary services	ISO/IEC 15992:1998
Communications Services	JTC1/SC06	ISO/IEC 17309:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Mapping functions for the employment of a circuit mode basic service and the supplementary service user-to-user signaling as a pair of on-demand inter-PINX connections	ISO/IEC 17309:2000
Communications Services	JTC1/SC06	ISO/IEC 17310:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Mapping functions for the employment of a circuit mode basic service and the supplementary service user-to-user signaling as a pair of on-demand inter-PINX connections	ISO/IEC 17310:2000
Communications Services	JTC1/SC06	ISO/IEC 17311:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Mapping functions for the employment of 64 kbit/s circuit mode connections with 8 kbit/s sub-multiplexing	ISO/IEC 17311:2000
Communications Services	JTC1/SC06	ISO/IEC 17875:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Private User Mobility (PUM) -- Registration supplementary service	ISO/IEC 17875:2000
Communications Services	JTC1/SC06	ISO/IEC 17876:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Private User Mobility (PUM) -- Registration supplementary service	ISO/IEC 17876:2000

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 17877:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Private User Mobility (PUM) -- Call handling additional network features	ISO/IEC 17877:2000
Communications Services	JTC1/SC06	ISO/IEC 17878:2000	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Private User Mobility (PUM) -- Call handling additional network features	ISO/IEC 17878:2000
Communications Services	JTC1/SC06	ISO/IEC 18051:2000	Information technology -- Telecommunications and information exchange between systems -- Services for Computer Supported Telecommunications Applications (CSTA) Phase III	ISO/IEC 18051:2000
Communications Services	JTC1/SC06	ISO/IEC 18052:2000	Information technology -- Telecommunications and information exchange between systems -- Protocol for Computer Supported Telecommunications Applications (CSTA) Phase III	ISO/IEC 18052:2000
Communications Services	JTC1/SC06	ISO/IEC TR 18053:2000	Information technology -- Telecommunications and information exchange between systems -- Glossary of definitions and terminology for Computer Supported Telecommunications Applications (CSTA) Phase III	ISO/IEC TR 18053:2000
Communications Services	JTC1/SC06	ISO/IEC 19058:2001	Information technology -- Telecommunications and information exchange between systems -- Broadband Private Integrated Services Network -- Inter-exchange signaling protocol -- Generic functional protocol	ISO/IEC 19058:2001
Communications Services	JTC1/SC06	ISO/IEC 19459:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Single Step Call Transfer Supplementary Service	ISO/IEC 19459:2001
Communications Services	JTC1/SC06	ISO/IEC 19460:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Single Step Call Transfer Supplementary Service	ISO/IEC 19460:2001

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 20161:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Use of QSIG at the C reference point between a PINX and an Interconnecting Network	ISO/IEC 20161:2001
Communications Services	JTC1/SC06	ISO/IEC 21407:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Simple dialog supplementary service	ISO/IEC 21407:2001
Communications Services	JTC1/SC06	ISO/IEC 21408:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Simple dialog supplementary service	ISO/IEC 21408:2001
Communications Services	JTC1/SC06	ISO/IEC 21409:2001	Information technology -- Telecommunications and information exchange between systems -- Corporate telecommunication networks -- Signaling interworking between QSIG and H.323 -- Generic functional protocol for the support of supplementary services	ISO/IEC 21409:2001
Communications Services	JTC1/SC06	ISO/IEC 21410:2001	Information technology -- Telecommunications and information exchange between systems -- Corporate telecommunication networks -- Signaling interworking between QSIG and H.323 -- Call transfer supplementary services	ISO/IEC 21410:2001
Communications Services	JTC1/SC06	ISO/IEC 21411:2001	Information technology -- Telecommunications and information exchange between systems -- Corporate telecommunication networks -- Signaling interworking between QSIG and H.323 -- Call diversion supplementary services	ISO/IEC 21411:2001
Communications Services	JTC1/SC06	ISO/IEC 21888:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Specification, functional model and information flows -- Call Identification and Call Linkage Additional Network Feature	ISO/IEC 21888:2001

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	JTC1/SC06	ISO/IEC 21889:2001	Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Network -- Inter-exchange signaling protocol -- Call Identification and Call Linkage Additional Network Feature	ISO/IEC 21889:2001
Communications Services	JTC1/SC06	ISO/IEC TR 21890:2001	Information technology -- Telecommunications and information exchange between systems -- Interoperation of PISNs with IP networks	ISO/IEC TR 21890:2001
Information Services	JTC1/SC17	ISO/IEC 7501-1:1997	Identification cards -- Machine readable travel documents -- Part 1: Machine readable passport Note: ISO/IEC 7501-1 endorses the Third Edition of ICAO Doc. 9303. The Fourth Edition of ICAO Doc. 9303 is not yet endorsed by ISO	ISO/IEC 7501-1:1997
Information Services	JTC1/SC17	ISO/IEC 7501-2:1997	Identification cards -- Machine readable travel documents -- Part 2: Machine readable visa	ISO/IEC 7501-2:1997
Information Services	JTC1/SC17	ISO/IEC 7501-3:1997	Identification cards -- Machine readable travel documents -- Part 3: Machine readable official travel documents	ISO/IEC 7501-3:1997
Information Services	JTC1/SC32	ISO/IEC 10032:1995	Information technology -- Reference Model of Data Management	ISO/IEC 10032:1995
Information Services	JTC1/SC32	ISO/IEC 14662:1997 (E)	Information technology -- Open-edi reference model	ISO/IEC 14662:1997 (E)
Information Services	JTC1/SC22	ISO/IEC 16509:1999	Information technology -- Year 2000 terminology	ISO/IEC 16509:1999
Security Services	JTC1/SC27	ISO/IEC 15408-1:1999	Information technology -- Security techniques -- Evaluation criteria for IT security -- Part 1: Introduction and general model	ISO/IEC 15408-1:1999
Security Services	JTC1/SC27	ISO/IEC 15408-2:1999	Information technology -- Security techniques -- Evaluation criteria for IT security -- Part 2: Security functional requirements	ISO/IEC 15408-2:1999
Security Services	JTC1/SC27	ISO/IEC 15408-3:1999	Information technology -- Security techniques -- Evaluation criteria for IT security -- Part 3: Security assurance requirements	ISO/IEC 15408-3:1999
System Services	JTC1	ISO/IEC 7498-3:1997	Information technology -- Open Systems Interconnection -- Basic Reference Model: Naming and addressing	ISO/IEC 7498-3:1997
System Services	JTC1/SC22	ISO/IEC 9899:1999/Cor.1:2001	Programming languages -- C -- Technical Corrigendum 1Subject to IEC Approval	ISO/IEC 9899:1999/Cor.1:2001

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
System Services	JTC1	ISO/IEC TR 10000-1:1998	Information technology -- Framework and taxonomy of International Standardized Profiles -- Part 1: General principles and documentation framework	ISO/IEC TR 10000-1:1998
System Services	JTC1	ISO/IEC TR 10000-2:1998	Information technology -- Framework and taxonomy of International Standardized Profiles -- Part 2: Principles and Taxonomy for OSI Profiles	ISO/IEC TR 10000-2:1998
System Services	JTC1	ISO/IEC TR 10000-3:1998	Information technology -- Framework and taxonomy of International Standardized Profiles -- Part 3: Principles and Taxonomy for Open System Environment Profiles	ISO/IEC TR 10000-3:1998
System Services	JTC1/SC22	ISO/IEC TR 10182:1993	Information technology -- Programming languages, their environments and system software interfaces -- Guidelines for language bindings	ISO/IEC TR 10182:1993
System Services	JTC1/SC07	ISO/IEC 10746-1:1998	Information technology -- Open Distributed Processing -- Reference model: Overview	ISO/IEC 10746-1:1998
System Services	JTC1/SC07	ISO/IEC 10746-2:1996	Information technology -- Open Distributed Processing -- Reference model: Foundations	ISO/IEC 10746-2:1996
System Services	JTC1/SC07	ISO/IEC 10746-3:1996	Information technology -- Open Distributed Processing -- Reference Model: Architecture	ISO/IEC 10746-3:1996
System Services	JTC1/SC07	ISO/IEC 10746-4:1998	Information technology -- Open Distributed Processing -- Reference Model: Architectural semantics	ISO/IEC 10746-4:1998
System Services	JTC1/SC22	ISO/IEC TR 11404:1996	Information technology -- Programming languages, their environments and system software interfaces -- Language-independent datatypes	ISO/IEC TR 11404:1996
System Services	JTC1/SC22	ISO/IEC 13886:1996	Information technology -- Language-Independent Procedure Calling (LIPC)	ISO/IEC 13886:1996
System Services	JTC1/SC22	ISO/IEC TR 14369:1999	Information technology -- Programming languages, their environments and system software interfaces -- Guidelines for the preparation of Language-Independent Service Specifications (LISS)	ISO/IEC TR 14369:1999
System Services	JTC1/SC29	ISO/IEC 14496-5:2000	Information technology -- Coding of audio-visual objects -- Part 5: Reference software	ISO/IEC 14496-5:2000
System Services	JTC1/SC29	ISO/IEC 14496-5:2001 2nd Ed	Information technology -- Coding of audio-visual objects -- Part 5: Reference software Subject to IEC Approval	ISO/IEC 14496-5:2001 2nd Ed

TRM Category	Standards Category (Committee)	Standards Reference Designation	Standards Description	Web Site Link
System Services	JTC1/SC22	ISO/IEC TR 15942:1998	Information technology -- Programming languages -- Guide for the use of the Ada programming language in high integrity systems Subject to IEC Approval	ISO/IEC TR 15942:1998
User Services	JTC1/SC24	ISO/IEC 8632-1:1999	Information technology -- Computer graphics -- Metafile for the storage and transfer of picture description information -- Part 1: Functional specification	ISO/IEC 8632-1:1999
User Services	JTC1/SC24	ISO/IEC 8632-3:1999	Information technology -- Computer graphics -- Metafile for the storage and transfer of picture description information -- Part 3: Binary encoding	ISO/IEC 8632-3:1999
User Services	JTC1/SC24	ISO/IEC 8632-4:1999	Information technology -- Computer graphics -- Metafile for the storage and transfer of picture description information -- Part 4: Clear text encoding	ISO/IEC 8632-4:1999
User Services	JTC1/SC24	ISO/IEC 10641:1993	Information technology -- Computer graphics and image processing -- Conformance testing of implementations of graphics standards	ISO/IEC 10641:1993
User Services	JTC1/SC24	ISO/IEC 11072:1992	Information technology -- Computer graphics -- Computer Graphics Reference Model	ISO/IEC 11072:1992
User Services	JTC1/SC29	ISO/IEC 13818-4:1998	Information technology -- Generic coding of moving pictures and associated audio information -- Part 4: Conformance testing	ISO/IEC 13818-4:1998
User Services		Attachment Binary Bitstreams	Binary Bitstreams	Attachment Binary Bitstreams
User Services	JTC1/SC02	ISO/IEC TR 15285:1998	Information technology -- An operational model for characters and glyphs	ISO/IEC TR 15285:1998

3.3.2 Federal Information Processing Standards (FIPS)

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	FIPS 159: 1990	Detail Specification for 62.5 Core Diameter/125-m Cladding Diameter Class Ia Multimode, Graded-Index Optical Waveguide Fibers	http://csrc.nist.gov/publications/fips/

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
Information Services	FIPS:	FIPS for Standard Page Description Language (SPDL)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 10-4: 1995	Countries, Dependencies, Areas of Special Sovereignty and their Principal Administrative Divisions	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 127-2: 1993	Database Language SQL	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 152: 1988	Standard Generalized Markup Language (SGML)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 161-2: 1996	Electronic Data Interchange (EDI)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 173-1: 1994	Spatial Data Transfer Standard (SDTS)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 192: 1994	Application Profile for the Government Information Location Service (GILS)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 192-1: 1997	Application Profile for the Government Information Locator Service (GILS)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 192-1 (a) & (b): 1997	Application Profile for the Government Information Locator Service (GILS)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 4-2: 1998	Representation of Calendar Date and Ordinal Date for Information Interchange	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 5-2: 1987	Codes for the Identification of the States, the District of Columbia, and the Outlaying Areas of the United States, and Associated Areas	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 55 DC3: 1994	Guideline: Codes for Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 55 DC-3: 1998	Guideline: Codes for Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 55-3: 1994	Guideline: Named Populated Places, Primary County Divisions, and Other Locational Entities of the United States, Puerto Rico, and the Outlying Areas	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 6-4: 1992	Countries and Equivalent Entities of the US. Its Possessions, and Associated Areas	http://csrc.nist.gov/publications/fips/

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
Information Services	FIPS 66: 1987	Standard Industrial Classification (SIC) Codes 79	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 83: 1980	Guideline on User Authentication Techniques for Computer Network Access Control	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 8-6: 1995	Metropolitan Areas (MAs) (Including MSAs, CMSAs, PMSAs, and NECMAs)	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 9-1: 1990	Congressional Districts of the U.S.	http://csrc.nist.gov/publications/fips/
Information Services	FIPS 92: 1983	Guideline for Standard Occupational Classification (SOC) Codes	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 102: 1983	Guideline for Computer Security Certification and Accreditation	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 112: 1985	Password Usage	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 113: 1985	Computer Data Authentication	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 140-1: 1994	Security Requirements for Cryptographic Modules	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 171: 1992	Key Management Using ANSI X9.17, 1992	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 180: 1993	Secure Hash Standard (SHS)	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 180-1: 1995	Secure Hash Standard (SHS)	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 181: 1993	Automated Password Generator (APG)	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 185: 1994	Escrowed Encryption Standard (EES)	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 186: 1994	Digital Signature Standard (DSS)	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 186-1: 1998	Digital Signature Standard (DSS)	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 188: 1994	Standard Security Label (SSL) for Information Transfer	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 190: 1994	Guideline for the Use of Advanced Authentication Technology Alternatives	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 191: 1994	Guideline for the Analysis of Local Area Network Security	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 196: 1997	Entity Authentication Use Public Key Cryptography	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 31: 1974	Guidelines for Automatic Data Processing Physical Security and Risk Management	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 46-3: 1999	Data Encryption Standard (DES)	_
Security Services	FIPS 48: 1977	Guidelines on Evaluation of Techniques for Automated Personal Identification	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 73: 1980	Guidelines for Security of Computer Applications	http://csrc.nist.gov/publications/fips/

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
Security Services	FIPS 74: 1981	Guidelines for Implementation and Using the NBS Data Encryption Standard	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 81: 1980	Data Encryption Standard (DES) Modes of Operation	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 87: 1981	Guidelines for ADP Contingency Planning	http://csrc.nist.gov/publications/fips/
Security Services	FIPS 140-2:1999	Security Requirements for Cryptographic Modules (Emerging standard)	
Security Services	FIPS 140-1:1994	Security Requirements for Cryptographic Modules (Retiring Standard)	
System Services	FIPS:	Portable Operating System Interface (POSIX®) - Real Time Extensions	http://csrc.nist.gov/publications/fips/
System Services	FIPS 183: 1993	Integration Definition for Function Modeling (IDEF0)	http://csrc.nist.gov/publications/fips/
System Services	FIPS 184: 1993	Integration Definition for Information Modeling (IDEF1X)	http://csrc.nist.gov/publications/fips/
System Services	FIPS PUB (future):	POSIX® Real Time Extensions: Asynchronous I/O Option	http://csrc.nist.gov/publications/fips/
System Services	FIPS PUB (future):	Portable Operating System Interface (POSIX®) - Real Time Extensions, Semaphores Option	http://csrc.nist.gov/publications/fips/

3.3.3 Institute of Electrical and Electronic Engineers (IEEE)

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	LAN/MAN Overview and Architecture	802.1	IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802-2001.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1F-1993	IEEE Standard for Local and Metropolitan Area Networks: Common Definitions and Procedures for IEEE 802 Management Information	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802-2001.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1H-1997	R2001) (ISO/IEC TR11802-5:1997), IEEE Technical Report and Guidelines--Part 5: Media Access Control (MAC) Bridging of Ethernet V2.0 in Local Area Networks	

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	LAN/MAN Bridging and Routing	802.1B, 1995	IEEE Standard for Information technology--Telecommunications and information exchange between systems--IEEE standard for local and metropolitan area networks--Common specifications--Part 2: LAN/MAN Management	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1B-1995.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1D, 1998	IEEE Standard for Information technology--Telecommunications and information exchange between systems--IEEE standard for local and metropolitan area networks--Common specifications--Media access control (MAC) Bridges	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1D-1998.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1t-2001	Amendment to IEEE Std 802.1D, 1998 Edition IEEE Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Common specifications--Part 3: Media Access Control (MAC) Bridges: Technical and Editorial Corrections	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1t-2001.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1w-2001	IEEE Standard for Information technology---Telecommunications and information exchange between systems---Local and metropolitan area networks---Common specifications Part 3: Media Access Control (MAC) Bridges---Amendment 2---Rapid Reconfiguration [Amendment to IEEE Std 802.1D, 1998 Edition (ISO/IEC 15802-3:1998) and IEEE Std 802.1t-2001]	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1w-2001.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1E, 1994	(ISO/IEC 15802-4-1994), IEEE Standard for Information technology--Telecommunications and information exchange between systems--IEEE standard for local and metropolitan area networks--Common specifications--Part 4: System Load Protocol	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1E-1994.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1G, 1998	ISO/IEC15802-5:1998), Information technology--Telecommunications and information exchange between systems--IEEE standard for local and metropolitan area networks--Common specifications--Part 5: Remote Media Access Control (MAC) bridging	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1G-1998.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1Q-1998	IEEE standard for local and metropolitan area networks: Virtual Bridged Local Area Networks	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1Q-1998.pdf

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	LAN/MAN Bridging and Routing	802.1u-2001	(Amendment to IEEE Std 802.1Q, 1998 Edition) IEEE Standard for Local and metropolitan area networks--- Virtual Bridged Local Area Networks---Amendment 1: Technical and editorial corrections	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1u-2001.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1v-2001	(Amendment to IEEE Std 802.1Q, 1998 Edition) IEEE Standards Amendment to IEEE 802.1Q: IEEE Standards for Local and Metropolitan Area Networks: Virtual Bridged Local Area Networks--Amendment 2: VLAN Classification by Protocol and Port	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1v-2001.pdf
Communications Services	LAN/MAN Bridging and Routing	802.1X-2001	IEEE Standards for Local and Metropolitan Area Networks: Port-Based Network Access Control	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.1X-2001.pdf
Communications Services	Logical Link Control (802.2)	802.2-1998	(ISO/IEC 8802-2:1998) IEEE Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements--Part 2: Logical Link Control	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.2-1998.pdf
Communications Services	CSMA/CD Access method (802.3)	802.3-2002	IEEE Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements--Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.3-2002.pdf
Communications Services	CSMA/CD Access method (802.3)	P802.3ae/D4.3	Draft IEEE supplement to ISO/IEC 8802-3 (IEEE 802.3)-- Media Access Control (MAC) Parameters, Physical Layer, and Management Parameters for 10Gb/s Operation	http://standards.ieee.org/reading/ieee/std/lanman/drafts/P802.3ae.pdf
Communications Services	CSMA/CD Access method (802.3)	P802.3af/D3.0	Draft IEEE supplement to IEEE 802-3-2000 (ISO/IEC 8802-3)--Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)	

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	Conformance Test Methodology for IEEE 802.3	1802.3-2001	IEEE Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks-Specific Requirements-Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications (Includes 1802.3d)	http://standards.ieee.org/reading/ieee/std/lanman/restricted/1802.3-2001.pdf
Communications Services	Token Ring Access Method (802.5)	802.5, 1998 Edition	(ISO/IEC 8802-5:1998) IEEE Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements--Part 5: Token Ring Access Method and Physical Layer Specification	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.5-1998.pdf
Communications Services	Token Ring Access Method (802.5)	802.5r / 802.5j, 1998 Edition	ISO/IEC 8802-5:1998/Amd.1), IEEE Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific Requirements--Part 5 Token ring access method and physical layer specifications--Admendment1: Dedicated Token Ring Operation and Fiber Optic Media	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.5r_and_802.5j-1998.pdf
Communications Services	Token Ring Access Method (802.5)	802.5t-2000	IEEE Standard for Information technology-Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements-Amendment to Part 5: Token Access Method and Physical Layer Specifications	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.5t-2000.pdf
Communications Services	Token Ring Access Method (802.5)	802.5v-2001	IEEE Standard for Information technology---Telecommunications and information exchange between systems---Local and metropolitan area networks---Specific requirements---Part 5: Token Ring access method and Physical Layer specifications---Amendment 5: Gigabit Token Ring operation	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.5v-2001.pdf
Communications Services	Token Ring Access Method (802.5)	802.5w-2000	(Corrigendum to IEEE Std 802-5:1998 including (ISO/IEC 8802-5:1998/Amd.1:1998) Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Part 5: Token ring access method and physical layer specifications--Corrigendum 1	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.5w-2000.pdf

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	DQDB Access method (802.6)	802.6, 1994	(ISO/IEC 8802-6:1994) IEEE Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific Requirements--Part 6: Distributed Queue Dual Bus (DQDB) Access method and physical layer specifications	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.6-1994.pdf
Communications Services	DQDB Access method (802.6)	802.6j-1995	Supplement to 802.6-1994: Connection-Oriented Service on a DQDB Subnetwork of a MAN	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.6j-1995.pdf
Communications Services	Broadband LAN (802.7)	802.7-1989 (R1997)	IEEE Recommended Practices for Broadband Local Area Networks	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.7-1989.pdf
Communications Services	LAN/MAN Security (802.10)	802.10-1998	IEEE Standard for Local and Metropolitan Area Networks: Interoperable LAN/MAN Security (SILS)	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.10-1998.pdf
Communications Services	LAN/MAN Security (802.10)	802.10a-1999	Supplement to 802.10-1998, Standard for Interoperable LAN/MAN Security (SILS) - Security Architecture Framework	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.10a-1999.pdf
Communications Services	LAN/MAN Security (802.10)	802.10c-1998	Supplement to 802.10-1998, Key management (Clause 3)	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.10c-1998.pdf
Communications Services	Wireless LANs (802.11)	802.11, 1999 Edition	(ISO/IEC 8802-11: 1999) IEEE Standard for Information Technology - Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Network - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.11-1999.pdf
Communications Services	Wireless LANs (802.11)	802.11a-1999	(ISO/IEC 8802-11:1999/Amd 1:2000(E)), Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications—Amendment 1: High-speed Physical Layer in the 5 GHz band	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.11a-1999.pdf

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	Wireless LANs (802.11)	802.11b-1999	Supplement to 802.11-1999,Wireless LAN MAC and PHY specifications: Higher speed Physical Layer (PHY) extension in the 2.4 GHz band	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.11b-1999.pdf
Communications Services	Wireless LANs (802.11)	802.11b-1999/Cor1-2001	IEEE Standard for Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications—Amendment 2: Higher-speed Physical Layer (PHY) extension in the 2.4 GHz band—Corrigendum1	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.11b-1999_Cor1-2001.pdf
Communications Services	Wireless LANs (802.11)	802.11d-2001	Amendment to IEEE 802.11-1999, (ISO/IEC 8802-11) Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements--Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Specification for Operation in Additional Regulatory Domains	
Communications Services	Demand Priority Access Method (802.12)	802.12, 1998 Edition	(ISO/IEC 8802-12:1998), IEEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area network - Specific requirements - Part 12: Demand-priority access method, physical layer and repeater specifications for 100 Mb/s Operation	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.12-1998.pdf
Communications Services	Wireless Personal Area Networks	802.15.1-2002	IEEE Standard for Part 15.1: Wireless Medium Access Control (MAC) and Physical Layer (PHY) specifications for Wireless Personal Area Networks (TM) (WPANs (TM))	http://standards.ieee.org/reading/ieee/std/lanman/drafts/P802.15.1.pdf
Communications Services	Broadband Wireless Metropolitan Area Networks	802.16-2001	IEEE Standard for Local and Metropolitan Area Networks--Part 16 -- Air Interface for Fixed Broadband Wireless Access Systems	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.16-2001.pdf

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	Broadband Wireless Metropolitan Area Networks	P802.16a/D3	Local and Metropolitan Area Networks--Part 16 -- Air Interface for fixed Broadband Wireless Access Systems -- Medium Access Control Modifications and Additional Physical Layer Specifications for 2-11 GHz	http://standards.ieee.org/reading/ieee/std/lanman/drafts/P802.16a.pdf
Communications Services	Broadband Wireless Metropolitan Area Networks	802.16.2-2001	IEEE Recommended Practice for Local and metropolitan area networks Coexistence of Fixed Broadband Wireless Access Systems	http://standards.ieee.org/reading/ieee/std/lanman/restricted/802.16.2-2001.pdf

3.3.4 Internet Engineering Task Force (IETF)

3.3.4.1 IETF Adopted Standards

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	TFTP	1350	The TFTP Protocol (Revision 2)	1350
Communications Services	USERS	866	Active users	866
Communications Services	UDP	768	User Datagram Protocol	768
Communications Services	TP-TCP	1006	ISO transport services on top of the TCP: Version 3	1006
Communications Services	TOPT-TIM	860	Telnet Timing Mark Option	860
Communications Services	TOPT-SUPP	858	Telnet Suppress Go Ahead Option	858

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	TOPT-STAT	859	Telnet Status Option	859
Communications Services	TOPT-EXTOP	861	Telnet Extended Options: List Option	861
Communications Services	TOPT-ECHO	857	Telnet Echo Option	857
Communications Services	TOPT-BIN	856	Telnet Binary Transmission	856
Communications Services	TIME	868	Time Protocol	868
Communications Services	TCP	793	Transmission Control Protocol	793
Communications Services	SNMP	1157	Simple Network Management Protocol (SNMP)	1157
Communications Services	SMTP-Pipe	2920	SMTP Service Extension for Command Pipelining	2920
Communications Services	SMIv2	2578	Structure of Management Information Version 2 (SMIv2)	2578
Communications Services	SMI	1155	Structure and identification of management information for TCP/IP-based int	1155
Communications Services	RMON-MIB	2819	Remote Network Monitoring Management Information Base	2819
Communications Services	RIP2-APP	1722	RIP Version 2 Protocol Applicability Statement	1722
Communications Services	RIP2	2453	RIP Version 2	2453
Communications Services	RARP	903	Reverse Address Resolution Protocol	903
Communications Services	QUOTE	865	Quote of the Day Protocol	865
Communications Services	PPP-HDLC	1662	PPP in HDLC-like Framing	1662

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	OSPF2	2328	OSPF Version 2	2328
Communications Services	MIB-II	1213	Management Information Base for Network Management of TCP/IP-based internet	1213
Communications Services	MAIL	822	Standard for the format of ARPA Internet text messages	822
Communications Services	IP-WB	907	Host Access Protocol specification	907
Communications Services	IP-SMDS	1209	Transmission of IP datagrams over the SMDS Service	1209
Communications Services	IP-SLIP	1055	Nonstandard for transmission of IP datagrams over serial lines: SLIP	1055
Communications Services	IP-NETBIOS	1088	Standard for the transmission of IP datagrams over NetBIOS networks	1088
Communications Services	IP-IPX	1132	Standard for the transmission of 802.2 packets over IPX networks	1132
Communications Services	IP-IEEE	1042	Standard for the transmission of IP datagrams over IEEE 802 networks	1042
Communications Services	IP-FR	2427	Multiprotocol Interconnect over Frame Relay	2427
Communications Services	IP-FDDI	1390	Transmission of IP and ARP over FDDI Networks	1390
Communications Services	IP-EE	895	Standard for the transmission of IP datagrams over experimental Ethernet	895
Communications Services	IP-E	894	Standard for the transmission of IP datagrams over Ethernet networks	894
Communications Services	IP-DC	891	DCN local-network protocols	891
Communications Services	IP-ARPA		[Was BBN Report 1822 (IMP/Host Interface). Now Historic.]	
Communications Services	IP-ARC	1201	Transmitting IP traffic over ARCNET networks	1201

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	IP	791	Internet Protocol	791
Communications Services	IGMP	1112	Host extensions for IP multicasting	1112
Communications Services	ICMP	792	Internet Control Message Protocol	792
Communications Services	ETHER-MIB	1643	Definitions of Managed Objects for the Ethernet-like Interface Types	1643
Communications Services	ECHO	862	Echo Protocol	862
Communications Services	DISCARD	863	Discard Protocol	863
Communications Services	DAYTIME	867	Daytime Protocol	867
Communications Services	CONV-MIB	2579	Textual Conventions for SMIv2	2579
Communications Services	CONF-MIB	2580	Conformance Statements for SMIv2	2580
Communications Services	Concise-MI	1212	Concise MIB definitions	1212
Communications Services	CHARGEN	864	Character Generator Protocol	864
Communications Services	ARP	826	Ethernet Address Resolution Protocol: Or converting network protocol address	826
Communications Services		919	Broadcasting Internet Datagrams	919
Communications Services		922	Broadcasting Internet datagrams in the presence of subnets	922
Communications Services		1122	Requirements for Internet Hosts - Communication Layers	1122
Communications Services		1123	Requirements for Internet Hosts - Application and Support	1123

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services		950	Internet Standard Subnetting Procedure	950
Communications Services			[Was Exterior Gateway Protocol (RFC 904). Now Historic.]	
Communications Services			[Was Routing Information Protocol (RIP). Replaced by STD 56.]	
Communications Services			ses to 48 bit Ethernet address for transmission on Ethernet hardware	
Communications Services	PPP	1661	The Point-to-Point Protocol (PPP)	1661
Communications Services	POP3	1939	Post Office Protocol - Version 3	1939
Communications Services	IP-HC	1044	Internet Protocol on Network System's HYPERchannel: Protocol specification	1044
Communications Services		3000	Internet Official Protocol Standards	3000
Security Services	ONE-PASS	2289	A One-Time Password System	2289
System Services	SMTP-SIZE	1870	SMTP Service Extension for Message Size Declaration	1870
System Services	SMTP	821	Simple Mail Transfer Protocol	821
System Services	NETBIOS	1001	Protocol standard for a NetBIOS service on a TCP/UDP transport: Concepts and methods	1001
System Services	NETBIOS	1002	Protocol standard for a NetBIOS service on a TCP/UDP transport: Detailed specifications	1002
System Services	FTP	959	File Transfer Protocol	959
System Services	DOMAIN	1034	Domain names - concepts and facilities	1034
System Services	DOMAIN	1035	Domain names - implementation and specification	1035
System Services			[Was Mail Routing and the Domain System. Now Historic.]	
User Services	TELNET	854	Telnet Protocol Specification	854
User Services	TELNET	855	Telnet Option Specifications	855

3.3.4.2 IETF Draft Standards

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	INTERGRMIB	2863	The Interfaces Group MIB	2863
Communications Services		2790	Host Resources MIB	2790
Communications Services	SNMP	2742	Definitions of Managed Objects for Extensible SNMP Agents	2742
Communications Services	VACM-SNMP	2575	View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)	2575
Communications Services	USM-SNMPV3	2574	User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)	2574
Communications Services	SNMP-APP	2573	SNMP Applications	2573
Communications Services	MPD-SNMP	2572	Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)	2572
Communications Services	ARCH-SNMP	2571	An Architecture for Describing SNMP Management Frameworks	2571
Communications Services	ICMPv6	2463	Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6)	2463
Communications Services	IPV6-AUTO	2462	IPv6 Stateless Address Autoconfiguration	2462
Communications Services	IPV6-ND	2461	Neighbor Discovery for IP Version 6 (IPv6)	2461
Communications Services	IPV6	2460	Internet Protocol, Version 6 (IPv6) Specification	2460
Communications Services	URI-GEN	2396	Uniform Resource Identifiers (URI): Generic Syntax	2396
Communications Services	IARP	2390	Inverse Address Resolution Protocol	2390
Communications Services	TN3270E	2355	TN3270 Enhancements	2355

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	TFTP-Opt	2349	TFTP Timeout Interval and Transfer Size Options	2349
Communications Services	TFTP-Blk	2348	TFTP Blocksize Option	2348
Communications Services	TFTP-Ext	2347	TFTP Option Extension	2347
Communications Services	UTF-8	2279	UTF-8, a transformation format of ISO 10646	2279
Communications Services	DHCP-BOOTP	2132	DHCP Options and BOOTP Vendor Extensions	2132
Communications Services	DHCP	2131	Dynamic Host Configuration Protocol	2131
Communications Services	FRAME-MIB	2115	Management Information Base for Frame Relay DTEs Using SMIv2	2115
Communications Services	SNMPv2-MIB	1907	Management Information Base for Version 2 of the Simple Network Management Protocols (SNMPv2)	1907
Communications Services	TRANS-MIB	1906	Transport Mappings for Version 2 of the Simple Network Management Protocol (SNMPv2)	1906
Communications Services	OPS-MIB	1905	Protocol Operations for Version 2 of the Simple Network Management Protocol (SNMPv2)	1905
Communications Services	OSPF-MIB	1850	OSPF Version 2 Management Information Base	1850
Communications Services	BGP-4-APP	1772	Application of the Border Gateway Protocol in the Internet	1772
Communications Services	BGP-4	1771	A Border Gateway Protocol 4 (BGP-4)	1771
Communications Services	802.5-MIB	1748	IEEE 802.5 MIB using SMIv2	1748
Communications Services	RIP2-MIB	1724	RIP Version 2 MIB Extension	1724
Communications Services	SIP-MIB	1694	Definitions of Managed Objects for SMDS Interfaces using SMIv2	1694

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services		1660	Definitions of Managed Objects for Parallel-printer-like Hardware Devices using SMIv2	1660
Communications Services		1659	Definitions of Managed Objects for RS-232-like Hardware Devices using SMIv2	1659
Communications Services		1658	Definitions of Managed Objects for Character Stream Devices using SMIv2	1658
Communications Services	BGP-4-MIB	1657	Definitions of Managed Objects for the Fourth Version of the Border Gateway Protocol (BGP-4)using SMIv2	1657
Communications Services	OSI-NSAP	1629	Guidelines for OSI NSAP Allocation in the Internet	1629
Communications Services	DECNET-MIB	1559	DECnet Phase IV MIB Extensions	1559
Communications Services		1542	Clarifications and Extensions for the Bootstrap Protocol	1542
Communications Services	DHCP-BOOTP	1534	Interoperation Between DHCP and BOOTP	1534
Communications Services	BRIDGE-MIB	1493	Definitions of Managed Objects for Bridges	1493
Communications Services	IP-X.25	1356	Multiprotocol Interconnect on X.25 and ISDN in the Packet Mode	1356
Communications Services	FINGER	1288	The Finger User Information Protocol	1288
Communications Services	IP-MTU	1191	Path MTU discovery	1191
Communications Services		1188	Proposed Standard for the Transmission of IP Datagrams over FDDI Networks	1188
Communications Services	BOOTP	951	Bootstrap Protocol	951
Communications Services	HTTP	2616	Hypertext Transfer Protocol -- HTTP/1.1	2616
Communications Services	IP-HIPPI	2067	IP over HIPPI	2067

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	PPP-DNCP	1762	The PPP DECnet Phase IV Control Protocol (DNCP)	1762
Communications Services	TOPT-LINE	1184	Telnet Linemode Option	1184
Security Services	RADIUS	2865	Remote Authentication Dial In User Service (RADIUS)	2865
Security Services		2617	HTTP Authentication: Basic and Digest Access Authentication	2617
Security Services	PPP-CHAP	1994	PPP Challenge Handshake Authentication Protocol (CHAP)	1994
Security Services	PPP-MP	1990	The PPP Multilink Protocol (MP)	1990
Security Services	PPP-LINK	1989	PPP Link Quality Monitoring	1989
Security Services	CON-MD5	1864	The Content-MD5 Header Field	1864
Security Services	RFC 2246:1999		Transport Layer Security (TLS) protocol	
System Services	MIME-CONF	2049	Multipurpose Internet Mail Extensions (MIME) Part Five: Conformance Criteria and Examples	2049
System Services	MIME-MSG	2047	MIME (Multipurpose Internet Mail Extensions) Part Three: Message Header Extensions for Non-ASCII Text	2047
System Services	MIME-MEDIA	2046	Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types	2046
System Services	MIME	2045	Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies	2045
System Services	LDAP	1777	Lightweight Directory Access Protocol	1777
System Services		1652	SMTP Service Extension for 8bit-MIMEtransport	1652
System Services	NTPV3	1305	Network Time Protocol (Version 3) Specification, Implementation	1305
		3275	(Extensible Markup Language) XML-Signature Syntax and Processing	3275
	MINFAX-IM	3192	Minimal FAX address format in Internet Mail	3192
	MIN-PSTN	3191	Minimal GSTN address format in Internet Mail	3191
		2741	Agent Extensibility (AgentX) Protocol Version 1	2741
	XDR	1832	XDR: External Data Representation Standard	1832
		1778	The String Representation of Standard Attribute Syntaxes	1778
	ISO-TS-ECH	1575	An Echo Function for CLNP (ISO 8473)	1575
	NICNAME	954	NICNAME/WHOIS	954

3.3.4.3 IETF Proposed Standards

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	XNSCP	1764	The PPP XNS IDP Control Protocol (XNSCP)	1764
Communications Services	X25-MIB	1461	SNMP MIB extension for Multiprotocol Interconnect over X.25	1461
Communications Services	X.509-CRMF	2511	Internet X.509 Certificate Request Message Format	2511
Communications Services	WHOIS++M	1914	How to Interact with a Whois++ Mesh	1914
Communications Services	WHOIS++A	1913	Architecture of the Whois++ Index Service	1913
Communications Services	WHOIS++	1835	Architecture of the WHOIS++ service	1835
Communications Services	WEBDAV	2518	HTTP Extensions for Distributed Authoring -- WEBDAV	2518
Communications Services	VRRP	2338	Virtual Router Redundancy Protocol	2338
Communications Services	VPNI	2685	Virtual Private Networks Identifier	2685
Communications Services	VEMMI-URL	2122	VEMMI URL Specification	2122
Communications Services	URN-SYNTAX	2141	URN Syntax	2141
Communications Services	URLZ39.50	2056	Uniform Resource Locators for Z39.50	2056
Communications Services	URLMAILTO	2368	The mailto URL scheme	2368
Communications Services	URL-ACC	2017	Definition of the URL MIME External-Body Access-Type	2017
Communications Services	URL	1808	Relative Uniform Resource Locators	1808

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	URL	1738	Uniform Resource Locators (URL)	1738
Communications Services	URI-ATT	2079	Definition of an X.500 Attribute Type and an Object Class to Hold Uniform Resource Identifiers (URIs)	2079
Communications Services	UPS-MIB	1628	UPS Management Information Base	1628
Communications Services	UNI-SIG	2331	ATM Signaling Support for IP over ATM - UNI Signaling 4.0 Update	2331
Communications Services	TXT-DIR	2425	A MIME Content-Type for Directory Information	2425
Communications Services	TSIG	2845	Secret Key Transaction Authentication for DNS (TSIG)	2845
Communications Services	TSA	3161	Internet X.509 Public Key Infrastructure Time-Stamp Protocol (TSP)	3161
Communications Services	TRANS-IPV6	2893	Transition Mechanisms for IPv6 Hosts and Routers	2893
Communications Services	TOPT-XDL	1096	Telnet X display location option	1096
Communications Services	TOPT-X.3	1053	Telnet X.3 PAD option	1053
Communications Services	TOPT-TS	1079	Telnet terminal speed option	1079
Communications Services	TOPT-TLN	946	Telnet terminal location number option	946
Communications Services	TOPT-TERM	1091	Telnet terminal-type option	1091
Communications Services	TOPT-TACAC	927	TACACS user identification Telnet option	927
Communications Services	TOPT-SUPO	749	Telnet SUPDUP-Output option	749
Communications Services	TOPT-SUP	736	Telnet SUPDUP option	736

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	TOPT-SNDL	779	Telnet send-location option	779
Communications Services	TOPT-RFC	1372	Telnet Remote Flow Control Option	1372
Communications Services	TOPT-REM	726	Remote Controlled Transmission and Echoing Telnet option	726
Communications Services	TOPT-OM	933	Output marking Telnet option	933
Communications Services	TOPT-NAWS	1073	Telnet window size option	1073
Communications Services	TOPT-LOGO	727	Telnet logout option	727
Communications Services	TOPT-EXT	698	Telnet extended ASCII option	698
Communications Services	TOPT-EOR	885	Telnet end of record option	885
Communications Services	TOPT-ENVIR	1572	Telnet Environment Option	1572
Communications Services	TOPT-DATA	1043	Telnet Data Entry Terminal option: DODIIS implementation	1043
Communications Services	TOPT-BYTE	735	Revised Telnet byte macro option	735
Communications Services	TOPT-AUTH	2941	Telnet Authentication Option	2941
Communications Services	TOPT-3270	1041	Telnet 3270 regime option	1041
Communications Services	TN2370E-RT	2562	Definitions of Protocol and Managed Objects for TN3270E Response Time Collection Using SMIv2 (TN3270E-RT-MIB)	2562
Communications Services	TMUX	1692	Transport Multiplexing Protocol (TMux)	1692
Communications Services	TLS	2712	Addition of Kerberos Cipher Suites to Transport Layer Security (TLS)	2712

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	TKEY-RR	2930	Secret Key Establishment for DNS (TKEY RR)	2930
Communications Services	TIPV3	2371	Transaction Internet Protocol Version 3.0	2371
Communications Services	TIFF	2302	Tag Image File Format (TIFF) - image/tiff MIME Sub-type Registration	2302
Communications Services	TCP-EXT	1323	TCP Extensions for High Performance	1323
Communications Services	TCP-CC	2581	TCP Congestion Control	2581
Communications Services	TCP-ACK	2018	TCP Selective Acknowledgement Options	2018
Communications Services	TABLE-MIB	2096	IP Forwarding Table MIB	2096
Communications Services	SUBTABLE	2293	Representing Tables and Subtrees in the X.500 Directory	2293
Communications Services	STR-LDAP	2254	The String Representation of LDAP Search Filters	2254
Communications Services	STD-MIBs	1239	Reassignment of experimental MIBs to standard MIBs	1239
Communications Services	SRB-MIB	1525	Definitions of Managed Objects for Source Routing Bridges	1525
Communications Services	SPKM	2025	The Simple Public-Key GSS-API Mechanism (SPKM)	2025
Communications Services	SOCKSV5	1928	SOCKS Protocol Version 5	1928
Communications Services	SNMP-X.25	1382	SNMP MIB Extension for the X.25 Packet Layer	1382
Communications Services	SNMPv2	1441	Introduction to version 2 of the Internet-standard Network Management Framework	1441
Communications Services	SNMP-OSI	1418	SNMP over OSI	1418

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	SNMP-LAPB	1381	SNMP MIB Extension for X.25 LAPB	1381
Communications Services	SNMP-IPX	1420	SNMP over IPX	1420
Communications Services	SNMP-AT	1419	SNMP over AppleTalk	1419
Communications Services	SNMP	2576	Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework	2576
Communications Services	SNANAU-MIB	1666	Definitions of Managed Objects for SNA NAUs using SMIv2	1666
Communications Services	SNANAU-APP	2051	Definitions of Managed Objects for APPC using SMIv2	2051
Communications Services	SNA	1982	Serial Number Arithmetic	1982
Communications Services	SMTP-ETRN	1985	SMTP Service Extension for Remote Message Queue Starting	1985
Communications Services	SMTP-ENH	2034	SMTP Service Extension for Returning Enhanced Error Codes	2034
Communications Services	SMTP-DSN	1891	SMTP Service Extension for Delivery Status Notifications	1891
Communications Services	SMTP	2821*	Simple Mail Transfer Protocol	2821*
Communications Services	SMFAX-IM	2305	A Simple Mode of Facsimile Using Internet Mail	2305
Communications Services	SLPv2	3059	Attribute List Extension for the Service Location Protocol	3059
Communications Services	SLP	3224*	Vendor Extensions for Service Location Protocol, Version 2	3224*
Communications Services	SLP	2165	Service Location Protocol	2165
Communications Services	SLM-APP	2287	Definitions of System-Level Managed Objects for Applications	2287

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Communications Services	SIP	2543	SIP: Session Initiation Protocol	2543
Communications Services	SIIT	2765	Stateless IP/ICMP Translation Algorithm (SIIT)	2765
Communications Services	SDP	3107	Carrying Label Information in BGP-4	3107
Communications Services	SDP	2327	SDP: Session Description Protocol	2327
Communications Services	SDLCSMIv2	1747	Definitions of Managed Objects for SNA Data Link Control (SDLC) using SMIv2	1747
Communications Services	SCSP	2334	Server Cache Synchronization Protocol (SCSP)	2334
Communications Services	SC-DNS	2538	Storing Certificates in the Domain Name System (DNS)	2538
Communications Services	SASL-ANON	2245	Anonymous SASL Mechanism	2245
Communications Services	SASL	2222	Simple Authentication and Security Layer (SASL)	2222
Communications Services	SACK	2883	An Extension to the Selective Acknowledgement (SACK) Option for TCP	2883
Communications Services	RTSP	2326	Real Time Streaming Protocol (RTSP)	2326
Communications Services	RTP-RAD	2198	RTP Payload for Redundant Audio Data	2198
Communications Services	RTP-MPEG	2250	RTP Payload Format for MPEG1/MPEG2 Video	2250
Communications Services	RTP-H.261	2032	RTP Payload Format for H.261 Video Streams	2032
Communications Services	RTP-CELLB	2029	RTP Payload Format of Sun's CellB Video Encoding	2029
Communications Services	RTP-AV	1890	RTP Profile for Audio and Video Conferences with Minimal Control	1890

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Communications Services	RTP	1889	RTP: A Transport Protocol for Real-Time Applications	1889
Communications Services	RSVP-MIB	2206	RSVP Management Information Base using SMIv2	2206
Communications Services	RSVP-IS	2210	The Use of RSVP with IETF Integrated Services	2210
Communications Services	RSVP-IPSEC	2207	RSVP Extensions for IPSEC Data Flows	2207
Communications Services	RSVP	3097	RSVP Cryptographic Authentication -- Updated Message Type Value	3097
Communications Services	RSVP	2205	Resource ReSerVation Protocol (RSVP) -- Version 1 Functional Specification	2205
Communications Services	RPSL	2769	Routing Policy System Replication	2769
Communications Services	RPSL	2622	Routing Policy Specification Language (RPSL)	2622
Communications Services	RPCSEC-GSS	2203	RPCSEC_GSS Protocol Specification	2203
Communications Services	RPC	1831	RPC: Remote Procedure Call Protocol Specification Version 2	1831
Communications Services	ROUT-ALERT	2113	IP Router Alert Option	2113
Communications Services	RMON-MIB	2895	Remote Network Monitoring MIB Protocol Identifier Reference	2895
Communications Services	RMON-MIB	2021	Remote Network Monitoring Management Information Base Version 2 using SMIv2	2021
Communications Services	RIP-TRIG	2091	Triggered Extensions to RIP to Support Demand Circuits	2091
Communications Services	RIPNG-IPV6	2080	RIPng for IPv6	2080
Communications Services	RIP-DC	1582	Extensions to RIP to Support Demand Circuits	1582

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Communications Services	RIP2-MD5	2082	RIP-2 MD5 Authentication	2082
Communications Services	RDBMS-MIB	1697	Relational Database Management System (RDBMS) Management Information Base (MIB) using SMIv2	1697
Communications Services	Print-MIB	1759	Printer MIB	1759
Communications Services	PPP-X25	1598	PPP in X.25	1598
Communications Services	PPP-TRANS	1663	PPP Reliable Transmission	1663
Communications Services	PPP-SNACP	2043	The PPP SNA Control Protocol (SNACP)	2043
Communications Services	PPP-OSINLC	1377	The PPP OSI Network Layer Control Protocol (OSINLCP)	1377
Communications Services	PPP-NBFCP	2097	The PPP NetBIOS Frames Control Protocol (NBFCP)	2097
Communications Services	PPP-LCP	1570	PPP LCP Extensions	1570
Communications Services	PPP-ISDN	1618	PPP over ISDN	1618
Communications Services	PPP-IPCP	1332	The PPP Internet Protocol Control Protocol (IPCP)	1332
Communications Services	PPP-FUNI	2363	PPP Over FUNI	2363
Communications Services	PPP-FRAME	1973	PPP in Frame Relay	1973
Communications Services	PPP-ECP	1968	The PPP Encryption Control Protocol (ECP)	1968
Communications Services	PPP-EAP	2284	PPP Extensible Authentication Protocol (EAP)	2284
Communications Services	PPP-CCP	1962	The PPP Compression Control Protocol (CCP)	1962

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Communications Services	PPP-BCP	2878	PPP Bridging Control Protocol (BCP)	2878
Communications Services	PPP-ATCP	1378	The PPP AppleTalk Control Protocol (ATCP)	1378
Communications Services	PPP-AAL	2364	PPP Over AAL5	2364
Communications Services	PPP/SECMIB	1472	The Definitions of Managed Objects for the Security Protocols of the Point-to-Point Protocol	1472
Communications Services	PPP/LCPMIB	1471	The Definitions of Managed Objects for the Link Control Protocol of the Point-to-Point Protocol	1471
Communications Services	PPP/IPMIB	1473	The Definitions of Managed Objects for the IP Network Control Protocol of the Point-to-Point Protocol	1473
Communications Services	PPP/Bridge	1474	The Definitions of Managed Objects for the Bridge Network Control Protocol of the Point-to-Point Protocol	1474
Communications Services	POP-URL	2384	POP URL Scheme	2384
Communications Services	POP3-EXT	2449	POP3 Extension Mechanism	2449
Communications Services	POP3-AUTH	1734	POP3 AUTHentication command	1734
Communications Services	PKIX	2560	X.509 Internet Public Key Infrastructure Online Certificate Status Protocol - OCSP	2560
Communications Services	PKICMP	2510	Internet X.509 Public Key Infrastructure Certificate Management Protocols	2510
Communications Services	PIB	3159	Structure of Policy Provisioning Information (SPPI)	3159
Communications Services	PEM-KEY	1424	Privacy Enhancement for Internet Electronic Mail: Part IV	1424
Communications Services	PEM-ENC	1421	Privacy Enhancement for Internet Electronic Mail: Part I	1421
Communications Services	PEM-CKM	1422	Privacy Enhancement for Internet Electronic Mail: Part II	1422

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Communications Services	PEM-ALG	1423	Privacy Enhancement for Internet Electronic Mail: Part III	1423
Communications Services	OTP-SASL	2444	The One-Time-Password SASL Mechanism	2444
Communications Services	OTP-ER	2243	OTP Extended Responses	2243
Communications Services	OSPF-NSSA	1587	The OSPF NSSA Option	1587
Communications Services	OSPF-Multi	1584	Multicast Extensions to OSPF	1584
Communications Services	OSPF-LSA	2370	The OSPF Opaque LSA Option	2370
Communications Services	OSPF-DC	1793	Extending OSPF to Support Demand Circuits	1793
Communications Services	OSI-Dir	1781	Using the OSI Directory to Achieve User Friendly Naming	1781
Communications Services	OR-ADD	2294	Representing the O/R Address hierarchy in the X.500 Directory Information Tree	2294
Communications Services	ODMR-SMTP	2645	ON-DEMAND MAIL RELAY (ODMR) SMTP with Dynamic IP Addresses	2645
Communications Services	NNTP	977	Network News Transfer Protocol	977
Communications Services	NHRP-SCSP	2335	A Distributed NHRP Service Using SCSP	2335
Communications Services	NHRP-MIB	2677	Definitions of Managed Objects for the NBMA Next Hop Resolution Protocol (NHRP)	2677
Communications Services	NHRP	2332	NBMA Next Hop Resolution Protocol (NHRP)	2332
Communications Services	NFSv4	3010	NFS version 4 Protocol	3010
Communications Services	NETWAREIP	2242	NetWare/IP Domain Name and Information	2242

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Communications Services	NETFAX	1314	A File Format for the Exchange of Images in the Internet	1314
Communications Services	NAT-PT	2766	Network Address Translation - Protocol Translation (NAT-PT)	2766
Communications Services	NAPTR	2915	The Naming Authority Pointer (NAPTR) DNS Resource Record	2915
Communications Services	NAI	2486	The Network Access Identifier	2486
Communications Services	MZAP	2776	Multicast-Scope Zone Announcement Protocol (MZAP)	2776
Communications Services	MULTI-UNI	2022	Support for Multicast over UNI 3.0/3.1 based ATM Networks	2022
Communications Services	MTU-IPV6	1981	Path MTU Discovery for IP version 6	1981
Communications Services	MPLS	3031	Multiprotocol Label Switching Architecture	3031
Communications Services	MODEM-MIB	1696	Modem Management Information Base (MIB) using SMIv2	1696
Communications Services	MOBILEIPSU	3220*	IP Mobility Support for IPv4	3220*
Communications Services	MOBILEIPMI	2006	The Definitions of Managed Objects for IP Mobility Support using SMIv2	2006
Communications Services	MLD-IPv6	2710	Multicast Listener Discovery (MLD) for IPv6	2710
Communications Services	MIXER	2156	MIXER (Mime Internet X.400 Enhanced Relay): Mapping between X.400 and RFC 822/MIME	2156
Communications Services	MINI-IP	2004	Minimal Encapsulation within IP	2004
Communications Services	MIME-VPIM	2423	VPIM Voice Message MIME Sub-type Registration	2423
Communications Services	MIME-VP2	2421	Voice Profile for Internet Mail - version 2	2421

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Communications Services	MIME-VCARD	2426	vCard MIME Directory Profile	2426
Communications Services	MIME-Sec	1848	MIME Object Security Services	1848
Communications Services	MIME-RPT	1892	The Multipart/Report Content Type for the Reporting of Mail System Administrative Messages	1892
Communications Services	MIME-RELAT	2387	The MIME Multipart/Related Content-type	2387
Communications Services	MIME-PGP	3156	MIME Security with OpenPGP	3156
Communications Services	MIME-PGP	2015	MIME Security with Pretty Good Privacy (PGP)	2015
Communications Services	MIME-MODEL	2077	The Model Primary Content Type for Multipurpose Internet Mail Extensions	2077
Communications Services	MIME-EXT	2231	MIME Parameter Value and Encoded Word Extensions: Character Sets, Languages, and Continuations	2231
Communications Services	MIME-Encyp	1847	Security Multiparts for MIME: Multipart/Signed and Multipart/Encrypted	1847
Communications Services	MIME-EDI	1767	MIME Encapsulation of EDI Objects	1767
Communications Services	MIME-ADPCM	2422	Toll Quality Voice - 32 kbit/s ADPCM MIME Sub-type Registration	2422
Communications Services	MIB-UDP	2013	SNMPv2 Management Information Base for the User Datagram Protocol using SMIv2	2013
Communications Services	MIB-TCP	2012	SNMPv2 Management Information Base for the Transmission Control Protocol using SMIv2	2012
Communications Services	MIB-IP	2011	SNMPv2 Management Information Base for the Internet Protocol using SMIv2	2011
Communications Services	MHTML	2557	MIME Encapsulation of Aggregate Documents, such as HTML (MHTML)	2557
Communications Services	MEXT-BGP4	2858	Multiprotocol Extensions for BGP-4	2858

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Communications Services	MEGACO	3015	Megaco Protocol Version 1.0	3015
Communications Services	MAU-MIB	2668	Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs) IP Tunnel MIB	2668
Communications Services	MAIL-SERV	2142	Mailbox Names for Common Services, Roles and Functions	2142
Communications Services	MAIL	2822*	Internet Message Format	2822*
Communications Services	MADCAP	2730	Multicast Address Dynamic Client Allocation Protocol (MADCAP)	2730
Communications Services	MacMIME	1740	MIME Encapsulation of Macintosh Files - MacMIME	1740
Communications Services	LIPKEY	2847	LIPKEY - A Low Infrastructure Public Key Mechanism Using SPKM	2847
Communications Services	LDIF	2849	The LDAP Data Interchange Format (LDIF) - Technical Specification	2849
Communications Services	LDAPv3	2589	Lightweight Directory Access Protocol (v3): Extensions for Dynamic Directory Services	2589
Communications Services	LDAPV3	2251	Lightweight Directory Access Protocol (v3)	2251
Communications Services	LDAP-URL	2255	The LDAP URL Format	2255
Communications Services	LDAP3-UTF8	2253	Lightweight Directory Access Protocol (v3): UTF-8 String Representation of Distinguished Names	2253
Communications Services	LDAP3-ATD	2252	Lightweight Directory Access Protocol (v3): Attribute Syntax Definitions	2252
Communications Services	LDAP	2830	Lightweight Directory Access Protocol (v3): Extension for Transport Layer Security	2830
Communications Services	L2TP-FR	3070	Layer Two Tunneling Protocol (L2TP) over Frame Relay	3070
Communications Services	L2TP	2661	Layer Two Tunneling Protocol "L2TP"	2661

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Communications Services	KERBEROS	1510	The Kerberos Network Authentication Service (V5)	1510
Communications Services	ITOT	2126	ISO Transport Service on top of TCP (ITOT)	2126
Communications Services	ITIP	2446	iCalendar Transport-Independent Interoperability Protocol (iTIP) Scheduling Events, BusyTime, To-dos and Journal Entries	2446
Communications Services	IS-IS	1195	Use of OSI IS-IS for routing in TCP/IP and dual environments	1195
Communications Services	ISDN-MIB	2127	ISDN Management Information Base using SMIv2	2127
Communications Services	ISAKMPSEC	2407	The Internet IP Security Domain of Interpretation for ISAKMP	2407
Communications Services	ISAKMP	2408	Internet Security Association and Key Management Protocol (ISAKMP)	2408
Communications Services	IPX-IP	1234	Tunneling IPX traffic through IP networks	1234
Communications Services	IPXCP	1552	The PPP Internetworking Packet Exchange Control Protocol (IPXCP)	1552
Communications Services	IPv6-PPP	2472	IP Version 6 over PPP	2472
Communications Services	IPv6-NBMA	2491	IPv6 over Non-Broadcast Multiple Access (NBMA) networks	2491
Communications Services	IPv6ATMNET	2492	IPv6 over ATM Networks	2492
Communications Services	IP-TR-MC	1469	IP Multicast over Token-Ring Local Area Networks	1469
Communications Services	IPSEC	2401	Security Architecture for the Internet Protocol	2401
Communications Services	IPP-M-S	2911	Internet Printing Protocol/1.1: Model and Semantics	2911
Communications Services	IPPM-MET	2678	IPPM Metrics for Measuring Connectivity	2678

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Communications Services	IPP-E-T	2910	Internet Printing Protocol/1.1: Encoding and Transport	2910
Communications Services	IPOA-MIB	2320	Definitions of Managed Objects for Classical IP and ARP Over ATM Using SMIv2 (IPOA-MIB)	2320
Communications Services	IPNG	1752	The Recommendation for the IP Next Generation Protocol	1752
Communications Services	IPENCAPIP	2003	IP Encapsulation within IP	2003
Communications Services	IPCOM-PPP	2509	IP Header Compression over PPP	2509
Communications Services	IPCOMP	3173	IP Payload Compression Protocol (IPComp)	3173
Communications Services	IP-CMPRS	1144	Compressing TCP/IP headers for low-speed serial links	1144
Communications Services	IP-AUTH	2402	IP Authentication Header	2402
Communications Services	IP-ATM	2225	Classical IP and ARP over ATM	2225
Communications Services	IOTP-HTTP	2935	Internet Open Trading Protocol (IOTP) HTTP Supplement	2935
Communications Services	IMIP	2447	iCalendar Message-Based Interoperability Protocol (iMIP)	2447
Communications Services	IMAPV4	2060	Internet Message Access Protocol - Version 4rev1	2060
Communications Services	IMAP-URL	2192	IMAP URL Scheme	2192
Communications Services	IMAPPOPAU	2195	IMAP/POP AUTHorize Extension for Simple Challenge/Response	2195
Communications Services	IMAP4UIDPL	2359	IMAP4 UIDPLUS extension	2359
Communications Services	IMAP4-QUO	2087	IMAP4 QUOTA extension	2087

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Communications Services	IMAP4NAME	2342	IMAP4 Namespace	2342
Communications Services	IMAP4MAIL	2193	IMAP4 Mailbox Referrals	2193
Communications Services	IMAP4LOGIN	2221	IMAP4 Login Referrals	2221
Communications Services	IMAP4-LIT	2088	IMAP4 non-synchronizing literals	2088
Communications Services	IMAP4-IDLE	2177	IMAP4 IDLE command	2177
Communications Services	IMAP4-AUTH	1731	IMAP4 Authentication Mechanisms	1731
Communications Services	IMAP4-ACL	2086	IMAP4 ACL extension	2086
Communications Services	IKE	2409	The Internet Key Exchange (IKE)	2409
Communications Services	IGMP	2236	Internet Group Management Protocol, Version 2	2236
Communications Services	IDPR-ARCH	1478	An Architecture for Inter-Domain Policy Routing	1478
Communications Services	IDPR	1479	Inter-Domain Policy Routing Protocol Specification: Version 1	1479
Communications Services	IDENT-MIB	1414	Identification MIB	1414
Communications Services	IDENT	1413	Identification Protocol	1413
Communications Services	ICMPv6-MIB	2466	Management Information Base for IP Version 6: ICMPv6 Group	2466
Communications Services	ICMP-ROUT	1256	ICMP Router Discovery Messages	1256
Communications Services	ICALENDAR	2445	Internet Calendaring and Scheduling Core Object Specification (iCalendar)	2445

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Communications Services	HPR-MIB	2238	Definitions of Managed Objects for HPR using SMIv2	2238
Communications Services	HMAC-MD5	2085	HMAC-MD5 IP Authentication with Replay Prevention	2085
Communications Services	HARPOON	1496	Rules for downgrading messages from X.400/88 to X.400/84 when MIME content-types are present in the message	1496
Communications Services	GSSAPI-SOC	1961	GSS-API Authentication Method for SOCKS Version 5	1961
Communications Services	GSSAPI-KER	1964	The Kerberos Version 5 GSS-API Mechanism	1964
Communications Services	GSN	2835	IP and ARP over HIPPI-6400 (GSN)	2835
Communications Services	GRE	2784	Generic Routing Encapsulation (GRE)	2784
Communications Services	GQOS	2212	Specification of Guaranteed Quality of Service	2212
Communications Services	FTPSECEXT	2228	FTP Security Extensions	2228
Communications Services	FTP	1415	FTP-FTAM Gateway Specification	1415
Communications Services	FR-MIB	2954	Definitions of Managed Objects for Frame Relay Service	2954
Communications Services	FFIF	2301	File Format for Internet Fax	2301
Communications Services	FDDI-MIB	1512	FDDI Management Information Base	1512
Communications Services	FDDI-MIB	1285	FDDI Management Information Base	1285
Communications Services	ESPDES-CBC	2405	The ESP DES-CBC Cipher Algorithm With Explicit IV	2405
Communications Services	ESP	2406	IP Encapsulating Security Payload (ESP)	2406

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Communications Services	Equiv	1494	Equivalences between 1988 X.400 and RFC-822 Message Bodies	1494
Communications Services	EMS-CODE	1893	Enhanced Mail System Status Codes	1893
Communications Services	EMF-MDN	2298	An Extensible Message Format for Message Disposition Notifications	2298
Communications Services	EDNS0	2671	Extension Mechanisms for DNS (EDNS0)	2671
Communications Services	EBN-MIB	2457	Definitions of Managed Objects for Extended Border Node	2457
Communications Services	DSN	1894	An Extensible Message Format for Delivery Status Notifications	1894
Communications Services	DS3-E3-MIB	2496	Definitions of Managed Object for the DS3/E3 Interface Type	2496
Communications Services	DNS-UPDATE	2136	Dynamic Updates in the Domain Name System (DNS UPDATE)	2136
Communications Services	DNS-SRV	2782	A DNS RR for specifying the location of services (DNS SRV)	2782
Communications Services	DNS-SECEXT	2535	Domain Name System Security Extensions	2535
Communications Services	DNSSEC	3008	Domain Name System Security (DNSSEC) Signing Authority	3008
Communications Services	DNS-NOTIFY	1996	A Mechanism for Prompt Notification of Zone Changes (DNS NOTIFY)	1996
Communications Services	DNS-NCACHE	2308	Negative Caching of DNS Queries (DNS NCACHE)	2308
Communications Services	DNS-MCGAM	2163	Using the Internet DNS to Distribute MIXER Conformant Global Address Mapping (MCGAM)	2163
Communications Services	DNS-IZT	1995	Incremental Zone Transfer in DNS	1995
Communications Services	DNS-IPV6	1886	DNS Extensions to support IP version 6	1886

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Communications Services	DNS-CLAR	2181	Clarifications to the DNS Specification	2181
Communications Services	DNS	2673	Binary Labels in the Domain Name System	2673
Communications Services	DLUR-MIB	2232	Definitions of Managed Objects for DLUR using SMIv2	2232
Communications Services	DLSW-MIB	2024	Definitions of Managed Objects for Data Link Switching using SMIv2	2024
Communications Services	DHK-DNS	2539	Storage of Diffie-Hellman Keys in the Domain Name System (DNS)	2539
Communications Services	DHCP-NDS	2241	DHCP Options for Novell Directory Services	2241
Communications Services	DESE-bis	2419	The PPP DES Encryption Protocol, Version 2 (DESE-bis)	2419
Communications Services	DC-MIB	2128	Dial Control Management Information Base using SMIv2	2128
Communications Services	DATA-URL	2397	The "data" URL scheme	2397
Communications Services	COPS-PR	3084	COPS Usage for Policy Provisioning (COPS-PR)	3084
Communications Services	COPS	2748	The COPS (Common Open Policy Service) Protocol	2748
Communications Services	CONT-DUR	2424	Content Duration MIME Header Definition	2424
Communications Services	CLDAP	1798	Connection-less Lightweight X.500 Directory Access Protocol	1798
Communications Services	CIPX	1553	Compressing IPX Headers Over WAN Media (CIPX)	1553
Communications Services	CIP	2651	The Architecture of the Common Indexing Protocol (CIP)	2651
Communications Services	CIM	3060	Policy Core Information Model -- Version 1 Specification	3060

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Communications Services	CIDMID-URL	2392	Content-ID and Message-ID Uniform Resource Locators	2392
Communications Services	BVCP	1763	The PPP Banyan Vines Control Protocol (BVCP)	1763
Communications Services	BGP-MIB	1269	Definitions of Managed Objects for the Border Gateway Protocol: Version 3	1269
Communications Services	BGP-COMM	1997	BGP Communities Attribute	1997
Communications Services	BGP-ASC	3065	Autonomous System Confederations for BGP	3065
Communications Services	BEEP	3080	The Blocks Extensible Exchange Protocol Core	3080
Communications Services	BAP-BACP	2125	The PPP Bandwidth Allocation Protocol (BAP) / The PPP Bandwidth Allocation Control Protocol (BACP)	2125
Communications Services	AUTH-SOCKS	1929	Username/Password Authentication for SOCKS V5	1929
Communications Services	ATM-TC-OID	2514	Definitions of Textual Conventions and OBJECT-IDENTITIES for ATM Management	2514
Communications Services	ATM-MIBMAN	2515	Definitions of Managed Objects for ATM Management	2515
Communications Services	AT-MIB	1742	AppleTalk Management Information Base II	1742
Communications Services	ATM	1755	ATM Signaling Support for IP over ATM	1755
Communications Services	APPN-MIB	2455	Definitions of Managed Objects for APPN	2455
Communications Services	APP-MIB	2564	Application Management MIB	2564
Communications Services	ACAP	2244	ACAP -- Application Configuration Access Protocol	2244
Communications Services	ABNF	2234	Augmented BNF for Syntax Specifications: ABNF	2234

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Communications Services	802.5-SSR	1749	IEEE 802.5 Station Source Routing MIB using SMIv2	1749
Communications Services	802.3-MIB	2108	Definitions of Managed Objects for IEEE 802.3 Repeater Devices using SMIv2	2108
Communications Services	802.12-MIB	2020	IEEE 802.12 Interface MIB	2020
Communications Services	3DESE	2420	The PPP Triple-DES Encryption Protocol (3DESE)	2420
Communications Services		2410	The NULL Encryption Algorithm and Its Use With IPsec	2410
Communications Services		2247	Using Domains in LDAP/X.500 Distinguished Names	2247
Communications Services		2227	Simple Hit-Metering and Usage-Limiting for HTTP	2227
Communications Services		2226	IP Broadcast over ATM Networks	2226
Communications Services		2218	A Common Schema for the Internet White Pages Service	2218
Communications Services		2215	General Characterization Parameters for Integrated Service Network Elements	2215
Communications Services		2214	Integrated Services Management Information Base Guaranteed Service Extensions using SMIv2	2214
Communications Services		2213	Integrated Services Management Information Base using SMIv2	2213
Communications Services		2211	Specification of the Controlled-Load Network Element Service	2211
Communications Services		2190	RTP Payload Format for H.263 Video Streams	2190
Communications Services		2183	Communicating Presentation Information in Internet Messages: The Content-Disposition Header Field	2183
Communications Services		2164	Use of an X.500/LDAP directory to support MIXER address mapping	2164

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Communications Services		2160	Carrying PostScript in X.400 and MIME	2160
Communications Services		2159	A MIME Body Part for FAX	2159
Communications Services		2158	X.400 Image Body Parts	2158
Communications Services		2157	Mapping between X.400 and RFC-822/MIME Message Bodies	2157
Communications Services		1397	Default Route Advertisement In BGP2 and BGP3 Version of The Border Gateway Protocol	1397
Communications Services		3256*	The DOCSIS (Data-Over-Cable Service Interface Specifications) Device Class DHCP (Dynamic Host Configuration Protocol) Relay Agent Information Sub-option	3256*
Communications Services		3255*	Extending Point-to-Point Protocol (PPP) over Synchronous Optical NETwork/Synchronous Digital Hierarchy (SONET/SDH) with virtual concatenation, high order and low order payloads	3255*
Communications Services		3253*	Versioning Extensions to WebDAV (Web Distributed Authoring and Versioning)	3253*
Communications Services		3246*	An Expedited Forwarding PHB (Per-Hop Behavior)	3246*
Communications Services		3242*	RObust Header Compression (ROHC): A Link-Layer Assisted Profile for IP/UDP/RTP	3242*
Communications Services		3241*	Robust Header Compression (ROHC) over PPP	3241*
Communications Services		3231*	Definitions of Managed Objects for Scheduling Management Operations	3231*
Communications Services		3230*	Instance Digests in HTTP	3230*
Communications Services		3229*	Delta encoding in HTTP	3229*
Communications Services		3226*	DNSSEC and IPv6 A6 aware server/resolver message size requirements	3226*

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services		3225*	Indicating Resolver Support of DNSSEC	3225*
Communications Services		3219*	Telephony Routing over IP (TRIP)	3219*
Communications Services		3214*	LSP Modification Using CR-LDP	3214*
Communications Services		3212*	Constraint-Based LSP Setup using LDP	3212*
Communications Services		3211*	Password-based Encryption for CMS	3211*
Communications Services		3209*	RSVP-TE: Extensions to RSVP for LSP Tunnels	3209*
Communications Services		3207*	SMTP Service Extension for Secure SMTP over Transport Layer Security	3207*
Communications Services		3206*	The SYS and AUTH POP Response Codes	3206*
Communications Services		3204*	MIME media types for ISUP and QSIG Objects	3204*
Communications Services		3202*	Definitions of Managed Objects for Frame Relay Service Level Definitions	3202*
Communications Services		3201*	Definitions of Managed Objects for Circuit to Interface Translation	3201*
Communications Services		3195*	Reliable Delivery for syslog	3195*
Communications Services		3193*	Securing L2TP using IPsec	3193*
Communications Services		3190*	RTP Payload Format for 12-bit DAT Audio and 20- and 24-bit Linear Sampled Audio	3190*
Communications Services		3189*	RTP Payload Format for DV (IEC 61834) Video	3189*
Communications Services		3185	Reuse of CMS Content Encryption Keys	3185

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services		3182*	Identity Representation for RSVP	3182*
Communications Services		3181*	Signaled Preemption Priority Policy Element	3181*
Communications Services		3175	Aggregation of RSVP for IPv4 and IPv6 Reservations	3175
Communications Services		3168	The Addition of Explicit Congestion Notification (ECN) to IP	3168
Communications Services		3165	Definitions of Managed Objects for the Delegation of Management Scripts	3165
Communications Services		3162	RADIUS and IPv6	3162
Communications Services		3153	PPP Multiplexing	3153
Communications Services		3146	Transmission of IPv6 Packets over IEEE 1394 Networks	3146
Communications Services		3145	L2TP Disconnect Cause Information	3145
Communications Services		3144	Remote Monitoring MIB Extensions for Interface Parameters Monitoring	3144
Communications Services		3140	Per Hop Behavior Identification Codes	3140
Communications Services		3124	The Congestion Manager	3124
Communications Services		3122	Extensions to IPv6 Neighbor Discovery for Inverse Discovery Specification	3122
Communications Services		3119	A More Loss-Tolerant RTP Payload Format for MP3 Audio	3119
Communications Services		3118	Authentication for DHCP Messages	3118
Communications Services		3115	Mobile IP Vendor/Organization-Specific Extensions	3115

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Communications Services		3111	Service Location Protocol Modifications for IPv6	3111
Communications Services		3110	RSA/SHA-1 SIGs and RSA KEYs in the Domain Name System (DNS)	3110
Communications Services		3108	Conventions for the use of the Session Description Protocol (SDP) for ATM Bearer Connections	3108
Communications Services		3095	RObust Header Compression (ROHC): Framework and four profiles	3095
Communications Services		3090	DNS Security Extension Clarification on Zone Status	3090
Communications Services		3081	Mapping the BEEP Core onto TCP	3081
Communications Services		3077	A Link-Layer Tunneling Mechanism for Unidirectional Links	3077
Communications Services		3074	DHC Load Balancing Algorithm	3074
Communications Services		3068	An Anycast Prefix for 6to4 Relay Routers	3068
Communications Services		3062	LDAP Password Modify Extended Operation	3062
Communications Services		3057	ISDN Q.921-User Adaptation Layer	3057
Communications Services		3056	Connection of IPv6 Domains via IPv4 Clouds	3056
Communications Services		3055	Management Information Base for the PINT Services Architecture	3055
Communications Services		3049	TN3270E Service Location and Session Balancing	3049
Communications Services		3047	RTP Payload Format for ITU-T Recommendation G.722.1	3047
Communications Services		3046	DHCP Relay Agent Information Option	3046

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services		3042	Enhancing TCP's Loss Recovery Using Limited Transmit	3042
Communications Services		3041	Privacy Extensions for Stateless Address Autoconfiguration in IPv6	3041
Communications Services		3039	Internet X.509 Public Key Infrastructure Qualified Certificates Profile	3039
Communications Services		3038	VCID Notification over ATM link for LDP	3038
Communications Services		3036	LDP Specification	3036
Communications Services		3035	MPLS using LDP and ATM VC Switching	3035
Communications Services		3034	Use of Label Switching on Frame Relay Networks Specification	3034
Communications Services		3033	The Assignment of the Information Field and Protocol Identifier in the Q.2941 Generic Identifier and Q.2957 User-to-user Signaling for the Internet Protocol	3033
Communications Services		3032	MPLS Label Stack Encoding	3032
Communications Services		3030	SMTP Service Extensions for Transmission of Large and Binary MIME Messages	3030
Communications Services		3028	Sieve: A Mail Filtering Language	3028
Communications Services		3024	Reverse Tunneling for Mobile IP, revised	3024
Communications Services		3023	XML Media Types	3023
Communications Services		3021	Using 31-Bit Prefixes on IPv4 Point-to-Point Links	3021
Communications Services		3020	Definitions of Managed Objects for Monitoring and Controlling the UNI/NNI Multilink Frame Relay Function	3020
Communications Services		3019	IP Version 6 Management Information Base for The Multicast Listener Discovery Protocol	3019

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Communications Services		3017	XML DTD for Roaming Access Phone Book	3017
Communications Services		3016	RTP Payload Format for MPEG-4 Audio/Visual Streams	3016
Communications Services		3014	Notification Log MIB	3014
Communications Services		3012	Mobile IPv4 Challenge/Response Extensions	3012
Communications Services		3011	The IPv4 Subnet Selection Option for DHCP	3011
Communications Services		3009	Registration of parityfec MIME types	3009
Communications Services		3007	Secure Domain Name System (DNS) Dynamic Update	3007
Communications Services		3006	Integrated Services in the Presence of Compressible Flows	3006
Communications Services		3004	The User Class Option for DHCP	3004
Communications Services		3003	The audio/mpeg Media Type	3003
Communications Services		2997	Specification of the Null Service Type	2997
Communications Services		2996	Format of the RSVP DCLASS Object	2996
Communications Services		2988	Computing TCP's Retransmission Timer	2988
Communications Services		2987	Registration of Charset and Languages Media Features Tags	2987
Communications Services		2984	Use of the CAST-128 Encryption Algorithm in CMS	2984
Communications Services		2982	Distributed Management Expression MIB	2982

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Communications Services		2981	Event MIB	2981
Communications Services		2976	The SIP INFO Method	2976
Communications Services		2971	IMAP4 ID extension	2971
Communications Services		2965	HTTP State Management Mechanism	2965
Communications Services		2961	RSVP Refresh Overhead Reduction Extensions	2961
Communications Services		2960	Stream Control Transmission Protocol	2960
Communications Services		2959	Real-Time Transport Protocol Management Information Base	2959
Communications Services		2955	Definitions of Managed Objects for Monitoring and Controlling the Frame Relay/ATM PVC Service Interworking Function	2955
Communications Services		2950	Telnet Encryption: CAST-128 64 bit Cipher Feedback	2950
Communications Services		2949	Telnet Encryption: CAST-128 64 bit Output Feedback	2949
Communications Services		2948	Telnet Encryption: DES3 64 bit Output Feedback	2948
Communications Services		2947	Telnet Encryption: DES3 64 bit Cipher Feedback	2947
Communications Services		2946	Telnet Data Encryption Option	2946
Communications Services		2945	The SRP Authentication and Key Exchange System	2945
Communications Services		2944	Telnet Authentication: SRP	2944
Communications Services		2943	TELNET Authentication Using DSA	2943

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Communications Services		2942	Telnet Authentication: Kerberos Version 5	2942
Communications Services		2940	Definitions of Managed Objects for Common Open Policy Service (COPS) Protocol Clients	2940
Communications Services		2938	Identifying Composite Media Features	2938
Communications Services		2937	The Name Service Search Option for DHCP	2937
Communications Services		2933	Internet Group Management Protocol MIB	2933
Communications Services		2932	IPv4 Multicast Routing MIB	2932
Communications Services		2931	DNS Request and Transaction Signatures (SIG(0)s)	2931
Communications Services		2925	Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations	2925
Communications Services		2919	List-Id: A Structured Field and Namespace for the Identification of Mailing Lists	2919
Communications Services		2918	Route Refresh Capability for BGP-4	2918
Communications Services		2916	E.164 number and DNS	2916
Communications Services		2913	MIME Content Types in Media Feature Expressions	2913
Communications Services		2912	Indicating Media Features for MIME Content	2912
Communications Services		2907	MADCAP Multicast Scope Nesting State Option	2907
Communications Services		2894	Router Renumbering for IPv6	2894
Communications Services		2891	LDAP Control Extension for Server Side Sorting of Search Results	2891

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Communications Services		2890	Key and Sequence Number Extensions to GRE	2890
Communications Services		2879	Content Feature Schema for Internet Fax (V2)	2879
Communications Services		2875	Diffie-Hellman Proof-of-Possession Algorithms	2875
Communications Services		2874	DNS Extensions to Support IPv6 Address Aggregation and Renumbering	2874
Communications Services		2873	TCP Processing of the IPv4 Precedence Field	2873
Communications Services		2872	Application and Sub Application Identity Policy Element for Use with RSVP	2872
Communications Services		2864	The Inverted Stack Table Extension to the Interfaces Group MIB	2864
Communications Services		2862	RTP Payload Format for Real-Time Pointers	2862
Communications Services		2857	The Use of HMAC-RIPEMD-160-96 within ESP and AH	2857
Communications Services		2856	Textual Conventions for Additional High Capacity Data Types	2856
Communications Services		2855	DHCP for IEEE 1394	2855
Communications Services		2853	Generic Security Service API Version 2 : Java Bindings	2853
Communications Services		2852	Deliver By SMTP Service Extension	2852
Communications Services		2851	Textual Conventions for Internet Network Addresses	2851
Communications Services		2848	The PINT Service Protocol: Extensions to SIP and SDP for IP Access to Telephone Call Services	2848
Communications Services		2846	GSTN Address Element Extensions in E-mail Services	2846

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Communications Services		2842	Capabilities Advertisement with BGP-4	2842
Communications Services		2837	Definitions of Managed Objects for the Fabric Element in Fiber Channel Standard	2837
Communications Services		2834	ARP and IP Broadcast over HIPPI-800	2834
Communications Services		2833	RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals	2833
Communications Services		2831	Using Digest Authentication as a SASL Mechanism	2831
Communications Services		2829	Authentication Methods for LDAP	2829
Communications Services		2815	Integrated Service Mappings on IEEE 802 Networks	2815
Communications Services		2814	SBM (Subnet Bandwidth Manager): A Protocol for RSVP-based Admission Control over IEEE 802-style networks	2814
Communications Services		2806	URLs for Telephone Calls	2806
Communications Services		2797	Certificate Management Messages over CMS	2797
Communications Services		2796	BGP Route Reflection - An Alternative to Full Mesh IBGP	2796
Communications Services		2794	Mobile IP Network Access Identifier Extension for IPv4	2794
Communications Services		2793	RTP Payload for Text Conversation	2793
Communications Services		2789	Mail Monitoring MIB	2789
Communications Services		2788	Network Services Monitoring MIB	2788
Communications Services		2787	Definitions of Managed Objects for the Virtual Router Redundancy Protocol	2787

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Communications Services		2750	RSVP Extensions for Policy Control	2750
Communications Services		2749	COPS usage for RSVP	2749
Communications Services		2747	RSVP Cryptographic Authentication	2747
Communications Services		2746	RSVP Operation Over IP Tunnels	2746
Communications Services		2745	RSVP Diagnostic Messages	2745
Communications Services		2744	Generic Security Service API Version 2 : C-bindings	2744
Communications Services		2743	Generic Security Service Application Program Interface Version 2, Update 1	2743
Communications Services		2740	OSPF for IPv6	2740
Communications Services		2739	Calendar Attributes for vCard and LDAP	2739
Communications Services		2738	Corrections to "A Syntax for Describing Media Feature Sets"	2738
Communications Services		2737	Entity MIB (Version 2)	2737
Communications Services		2735	NHRP Support for Virtual Private Networks	2735
Communications Services		2734	IPv4 over IEEE 1394	2734
Communications Services		2733	An RTP Payload Format for Generic Forward Error Correction	2733
Communications Services		2732	Format for Literal IPv6 Addresses in URL's	2732
Communications Services		2728	The Transmission of IP Over the Vertical Blanking Interval of a Television Signal	2728

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Communications Services		2726	PGP Authentication for RIPE Database Updates	2726
Communications Services		2725	Routing Policy System Security	2725
Communications Services		2720	Traffic Flow Measurement: Meter MIB	2720
Communications Services		2711	IPv6 Router Alert Option	2711
Communications Services		2688	Integrated Services Mappings for Low Speed Networks	2688
Communications Services		2687	PPP in a Real-time Oriented HDLC-like Framing	2687
Communications Services		2686	The Multi-Class Extension to Multi-Link PPP	2686
Communications Services		2684	Multiprotocol Encapsulation over ATM Adaptation Layer 5	2684
Communications Services		2681	A Round-trip Delay Metric for IPPM	2681
Communications Services		2680	A One-way Packet Loss Metric for IPPM	2680
Communications Services		2679	A One-way Delay Metric for IPPM	2679
Communications Services		2675	IPv6 Jumbograms	2675
Communications Services		2674	Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions	2674
Communications Services		2672	Non-Terminal DNS Name Redirection	2672
Communications Services		2670	Radio Frequency (RF) Interface Management Information Base for MCNS/DOCSIS compliant RF interfaces	2670
Communications Services		2669	DOCSIS Cable Device MIB Cable Device Management Information Base for DOCSIS compliant Cable Modems and Cable Modem Termination Systems	2669

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Communications Services		2665	Definitions of Managed Objects for the Ethernet-like Interface Types	2665
Communications Services		2662	Definitions of Managed Objects for the ADSL Lines	2662
Communications Services		2658	RTP Payload Format for PureVoice (tm) Audio	2658
Communications Services		2653	CIP Transport Protocols	2653
Communications Services		2652	MIME Object Definitions for the Common Indexing Protocol (CIP)	2652
Communications Services		2646	The Text/Plain Format Parameter	2646
Communications Services		2640	Internationalization of the File Transfer Protocol	2640
Communications Services		2634	Enhanced Security Services for S/MIME	2634
Communications Services		2633	S/MIME Version 3 Message Specification	2633
Communications Services		2632	S/MIME Version 3 Certificate Handling	2632
Communications Services		2631	Diffie-Hellman Key Agreement Method	2631
Communications Services		2630	Cryptographic Message Syntax	2630
Communications Services		2625	IP and ARP over Fiber Channel	2625
Communications Services		2623	NFS Version 2 and Version 3 Security Issues and the NFS Protocol's Use of RPCSEC_GSS and Kerberos V5	2623
Communications Services		2619	RADIUS Authentication Server MIB	2619
Communications Services		2618	RADIUS Authentication Client MIB	2618

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Communications Services		2615	PPP over SONET/SDH	2615
Communications Services		2613	Remote Network Monitoring MIB Extensions for Switched Networks Version 1.0	2613
Communications Services		2610	DHCP Options for Service Location Protocol	2610
Communications Services		2609	Service Templates and Service: Schemes	2609
Communications Services		2605	Directory Server Monitoring MIB	2605
Communications Services		2603	ILMI-Based Server Discovery for NHRP	2603
Communications Services		2602	ILMI-Based Server Discovery for MARS	2602
Communications Services		2601	ILMI-Based Server Discovery for ATMARP	2601
Communications Services		2598	An Expedited Forwarding PHB	2598
Communications Services		2597	Assured Forwarding PHB Group	2597
Communications Services		2596	Use of Language Codes in LDAP	2596
Communications Services		2595	Using TLS with IMAP, POP3 and ACAP	2595
Communications Services		2594	Definitions of Managed Objects for WWW Services	2594
Communications Services		2590	Transmission of IPv6 Packets over Frame Relay Networks Specification	2590
Communications Services		2587	Internet X.509 Public Key Infrastructure LDAPv2 Schema	2587
Communications Services		2585	Internet X.509 Public Key Infrastructure Operational Protocols: FTP and HTTP	2585

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Communications Services		2584	Definitions of Managed Objects for APPN/HPR in IP Networks	2584
Communications Services		2563	DHCP Option to Disable Stateless Auto-Configuration in IPv4 Clients	2563
Communications Services		2561	Base Definitions of Managed Objects for TN3270E Using SMIv2	2561
Communications Services		2559	Internet X.509 Public Key Infrastructure Operational Protocols - LDAPv2	2559
Communications Services		2558	Definitions of Managed Objects for the SONET/SDH Interface Type	2558
Communications Services		2554	SMTP Service Extension for Authentication	2554
Communications Services		2545	Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing	2545
Communications Services		2536	DSA KEYs and SIGs in the Domain Name System (DNS)	2536
Communications Services		2534	Media Features for Display, Print, and Fax	2534
Communications Services		2533	A Syntax for Describing Media Feature Sets	2533
Communications Services		2532	Extended Facsimile Using Internet Mail	2532
Communications Services		2530	Indicating Supported Media Features Using Extensions to DSN and MDN	2530
Communications Services		2529	Transmission of IPv6 over IPv4 Domains without Explicit Tunnels	2529
Communications Services		2526	Reserved IPv6 Subnet Anycast Addresses	2526
Communications Services		2513	Managed Objects for Controlling the Collection and Storage of Accounting Information for Connection-Oriented Networks	2513
Communications Services		2512	Accounting Information for ATM Networks	2512

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Communications Services		2508	Compressing IP/UDP/RTP Headers for Low-Speed Serial Links	2508
Communications Services		2507	IP Header Compression	2507
Communications Services		2497	Transmission of IPv6 Packets over ARCnet Networks	2497
Communications Services		2495	Definitions of Managed Objects for the DS1, E1, DS2 and E2 Interface Types	2495
Communications Services		2494	Definitions of Managed Objects for the DS0 and DS0 Bundle Interface Type	2494
Communications Services		2493	Textual Conventions for MIB Modules Using Performance History Based on 15 Minute Intervals	2493
Communications Services		2485	DHCP Option for The Open Group's User Authentication Protocol	2485
Communications Services		2484	PPP LCP Internationalization Configuration Option	2484
Communications Services		2480	Gateways and MIME Security Multiparts	2480
Communications Services		2478	The Simple and Protected GSS-API Negotiation Mechanism	2478
Communications Services		2476	Message Submission	2476
Communications Services		2474	Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers	2474
Communications Services		2473	Generic Packet Tunneling in IPv6 Specification	2473
Communications Services		2470	Transmission of IPv6 Packets over Token Ring Networks	2470
Communications Services		2467	Transmission of IPv6 Packets over FDDI Networks	2467
Communications Services		2465	Management Information Base for IP Version 6: Textual Conventions and General Group	2465

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services		2464	Transmission of IPv6 Packets over Ethernet Networks	2464
Communications Services		2459	Internet X.509 Public Key Infrastructure Certificate and CRL Profile	2459
Communications Services		2456	Definitions of Managed Objects for APPN TRAPS	2456
Communications Services		2454	IP Version 6 Management Information Base for the User Datagram Protocol	2454
Communications Services		2452	IP Version 6 Management Information Base for the Transmission Control Protocol	2452
Communications Services		2451	The ESP CBC-Mode Cipher Algorithms	2451
Communications Services		2440	OpenPGP Message Format	2440
Communications Services		2439	BGP Route Flap Damping	2439
Communications Services		2435	RTP Payload Format for JPEG-compressed Video	2435
Communications Services		2431	RTP Payload Format for BT.656 Video Encoding	2431
Communications Services		2429	RTP Payload Format for the 1998 Version of ITU-T Rec. H.263 Video (H.263+)	2429
Communications Services		2428	FTP Extensions for IPv6 and NATs	2428
Communications Services		2417	Definitions of Managed Objects for Multicast over UNI 3.0/3.1 based ATM Networks	2417
Communications Services		2404	The Use of HMAC-SHA-1-96 within ESP and AH	2404
Communications Services		2403	The Use of HMAC-MD5-96 within ESP and AH	2403
Communications Services		2389	Feature negotiation mechanism for the File Transfer Protocol	2389

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Communications Services		2388	Returning Values from Forms: multipart/form-data	2388
Communications Services		2385	Protection of BGP Sessions via the TCP MD5 Signature Option	2385
Communications Services		2381	Interoperation of Controlled-Load Service and Guaranteed Service with ATM	2381
Communications Services		2380	RSVP over ATM Implementation Requirements	2380
Communications Services		2374	An IPv6 Aggregatable Global Unicast Address Format	2374
Communications Services		2373	IP Version 6 Addressing Architecture	2373
Communications Services		2369	The Use of URLs as Meta-Syntax for Core Mail List Commands and their Transport through Message Header Fields	2369
Communications Services		2333	NHRP Protocol Applicability Statement	2333
Communications Services		2290	Mobile-IPv4 Configuration Option for PPP IPCP	2290
Communications Services		2266	Definitions of Managed Objects for IEEE 802.12 Repeater Devices	2266
Communications Services		2256	A Summary of the X.500(96) User Schema for use with LDAPv3	2256
Communications Services		2246	The TLS Protocol Version 1.0	2246
Communications Services		2005	Applicability Statement for IP Mobility Support	2005
Communications Services		1833	Binding Protocols for ONC RPC Version 2	1833
Communications Services		1829	The ESP DES-CBC Transform	1829
Communications Services		1828	IP Authentication using Keyed MD5	1828

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Communications Services		1812	Requirements for IP Version 4 Routers	1812
Communications Services		1648	Postmaster Convention for X.400 Operations	1648
Communications Services		1513	Token Ring Extensions to the Remote Network Monitoring MIB	1513
Communications Services		1502	X.400 Use of Extended Character Sets	1502
Communications Services		1370	Applicability Statement for OSPF	1370
Communications Services		1328	X.400 1988 to 1984 downgrading	1328
Communications Services		1277	Encoding Network Addresses to Support Operation over Non-OSI Lower Layers	1277
Communications Services		1276	Replication and Distributed Operations extensions to provide an Internet Directory using X.500	1276
Communications Services		1274	The COSINE and Internet X.500 Schema	1274
Security Services		3281*	An Internet Attribute Certificate Profile for Authorization	3281*
Security Services		3280*	Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile	3280*
Security Services		3279*	Algorithms and Identifiers for the Internet X.509 Public Key Infrastructure	3279*
Security Services			Certificate and Certificate Revocation List (CRL) Profile	
	CIDR-STRA	1519	Classless Inter-Domain Routing (CIDR): an Address Assignment and Aggregation Strategy	1519
	CIDR-ARCH	1518	An Architecture for IP Address Allocation with CIDR	1518
	CIDR	1517	Applicability Statement for the Implementation of Classless Inter-Domain Routing (CIDR)	1517
		1515	Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)	1515

3.3.5 International Standards Organization (ISO)

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Communications Services	Telecommunications 33.	33.040.01	Telecommunication systems in general	33.040.01
Communications Services	Telecommunications 33.	33.040.20	Transmission systems Including synchronization, cable systems, integrated cabling, pathways and multiplexing	33.040.20
Communications Services	Telecommunications 33.	33.040.30	Switching and signaling systems Including telecommunication call charging and billing aspects	33.040.30
Communications Services	Telecommunications 33.	33.040.35	Telephone networks Including Public Switched Telephone Networks (PSTN), Private Telecommunication Networks (PTN) and Private Integrated Service Networks (PISN)	33.040.35
Communications Services	Telecommunications 33.	33.040.40	Data communication networks Including Packet Switched Public Data Networks (PSPDN) and Ethernet	
Communications Services	Telecommunications 33.	33.080.00	Integrated Services Digital Network (ISDN)	Link to 33.080 (ISDN)
Communications Services	Telecommunications 33.	35.180.00	Modems	Modems, see 35.180
Communications Services	Telecommunications 33.	35.110.00	OSI Local Area, Wade Area and metropolitan Area networks	Link to 35.110 (LAN,MAN.WAN)
Communications Services	Telecommunications 33.	33.040.50	Lines, connections and circuits Including access networks and network elements	
Communications Services	Telecommunications 33.	33.040.99	Other equipment for telecommunication systems	
Communications Services	IT General 35.020	2382	Information technology -- Vocabulary -- Part 9: Data communication	ISO/IEC 2382-9:1995
Communications Services	IT General 35.020	2382	Information technology -- Vocabulary -- Part 32: Electronic Mail	ISO/IEC 2382-32:1999
Communications Services	IT General 35.020		Information technology -- Quality of service: Framework	ISO/IEC 13236:1998
Communications Services	IT General 35.020		Information technology -- Quality of service -- Guide to methods and mechanisms	ISO/IEC TR 13243:1999

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
Information Services	IT General 35.020	2382.4:1999	Information technology -- Vocabulary -- Part 4: Organization of data	ISO/IEC 2382-4:1999
Information Services	IT General 35.020	2382.5:1999	Information technology -- Vocabulary -- Part 5: Representation of data	ISO/IEC 2382-5:1999
Security Services	IT General 35.020	2382-8:1998	Information technology -- Vocabulary -- Part 8: Security	ISO/IEC 2382-8:1998
Security Services		ISO/IEC 10181-1:1996	Security frameworks for open systems: Overview	
Security Services		ISO/IEC 10181-2:1996	Security framework for open systems: Authentication framework	
Security Services		ISO/IEC 10181-3:1996	Security framework for open systems: Access control framework	
Security Services		ISO/IEC 10181-4:1997	Security framework for open systems: Non-repudiation framework	
Security Services		ISO/IEC 10181-5:1996	Security framework for open systems: Confidentiality framework	
Security Services		ISO/IEC 10181-6:1996	Security framework for open systems: Integrity framework	
Security Services		ISO/IEC 10181-7:1996	Security framework for open systems: Security audit and alarms framework	
Security Services		ISO IS 15408	The Common Criteria for Information Technology Security Evaluation	
System Services	IT General 35.020	2382-7: 2000	Information technology -- Vocabulary -- Part 7: Computer programming	ISO/IEC 2382-7:2000
System Services	IT General 35.020	2382	Information technology -- Vocabulary -- Part 18: Distributed data processing	ISO/IEC 2382-18:1999
	IT General 35.020	2382	Information technology -- Vocabulary -- Part 14: Reliability, maintainability and availability	ISO/IEC 2382-14:1997
	IT General 35.020	2382	Information technology -- Vocabulary -- Part 34: Artificial intelligence -- Neural networks	ISO/IEC 2382-34:1999
	Mgmt Quality 9000.	9000:2000	ISO 9000:2000, Quality management systems - Fundamentals and vocabulary	
	Mgmt Quality 9000.		ISO 9001:2000, Quality management systems - Requirements	

TRM Category	Standards Category	Standards Reference Designation	Standards Description	Web Site Link
	Mgmt Quality 9000.		ISO 9004:2000, Quality management systems - Guidelines for performance improvements	
	Mgmt Quality 9000.		ISO 19011, Guidelines on Quality and/or Environmental Management Systems Auditing (currently under development)	
	Mgmt Quality 9000.		ISO 10005:1995, Quality management - Guidelines for quality plans	
	Mgmt Quality 9000.		ISO 10006:1997, Quality management - Guidelines to quality in project management	
	Mgmt Quality 9000.		ISO 10007:1995, Quality management - Guidelines for configuration management	
	Mgmt Quality 9000.		ISO/DIS 10012, Quality assurance requirements for measuring equipment - Part 1: Metrological confirmation system for measuring equipment	
	Mgmt Quality 9000.		ISO 10012-2:1997, Quality assurance for measuring equipment - Part 2: Guidelines for control of measurement of processes	
	Mgmt Quality 9000.		ISO 10013:1995, Guidelines for developing quality manuals	
	Mgmt Quality 9000.		ISO/TR 10014:1998, Guidelines for managing the economics of quality	
	Mgmt Quality 9000.		ISO 10015:1999, Quality management - Guidelines for training	
	Image Technology 37.		Optical equipment Including microscopes, telescopes, etc.	37.02
	Image Technology 37.		Photography	37.04
	Image Technology 37.	37.08.00	Document imaging applications Including micrographics, electronic and optical applications	37.08
	Image Technology 37.		Graphic technology	37.1

3.3.6 International Telecommunications Union (ITU)

TRM Category	Standards Category	Standards Description	Web Site Link

TRM Category	Standards Category	Standards Description	Web Site Link
Communications Services	Telecom	Organization of the work of ITU-T	A
Communications Services	Telecom	Means of expression: definitions, symbols, classification	B
Communications Services	Telecom	General telecommunication statistics	C
Communications Services	Telecom	General tariff principles	D
Communications Services	Telecom	Overall network operation, telephone service, service operation and human factors	E
Communications Services	Telecom	Non-telephone telecommunication services	F
Communications Services	Telecom	Transmission systems and media, digital systems and networks	G
Communications Services	Telecom	Audiovisual and multimedia systems	H
Communications Services	Telecom	Integrated services digital network	I
Communications Services	Telecom	Transmission of television, sound program and other multimedia signals	J
Communications Services	Telecom	Protection against interference	K
Communications Services	Telecom	Construction, installation and protection of cables and other elements of outside plant	L
Communications Services	Telecom	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits	M
Communications Services	Telecom	Maintenance: international sound program and television transmission circuits	N
Communications Services	Telecom	Specifications of measuring equipment	O
Communications Services	Telecom	Telephone transmission quality, telephone installations, local line networks	P

TRM Category	Standards Category	Standards Description	Web Site Link
Communications Services	Telecom	Switching and signaling	Q
Communications Services	Telecom	Telegraph transmission	R
Communications Services	Telecom	Telegraph services terminal equipment	S
Communications Services	Telecom	Terminals for telematic services	T
Communications Services	Telecom	Telegraph switching	U
Communications Services	Telecom	Data communication over the telephone network	V
Communications Services	Telecom	Data networks and open system communication	X
Communications Services	Telecom	Global information infrastructure and internet protocol aspects	Y
Communications Services	Telecom	Languages and general software aspects for telecommunication systems	Z

3.3.7 World Wide Web Consortium (W3C) Standards

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
System Services	SOAP	SOAP version 1.2 is a lightweight protocol for exchange of information in a decentralized, distributed environment. It is an XML based protocol at the core of which is an envelope that defines a framework for describing what is in a message and how to process it and a transport binding framework for exchanging messages using an underlying protocol.	http://www.w3c.org/TR/2001/WD-soap12-part1-20011217/ http://www.w3c.org/TR/2001/WD-soap12-part2-20011217/

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
System Services	WSDL	Web Service Definition Language (WSDL) is an XML format for describing network services as a set of endpoints operating on messages containing either document-oriented or procedure-oriented information. The operations and messages are described abstractly, and then bound to a concrete network protocol and message format to define an endpoint.	http://www.w3.org/TR/wsdl
System Services	UDDI	The UDDI Project is an industry initiative that is working to enable businesses to quickly, easily, and dynamically find and transact with one another through web services. UDDI specification takes advantage of World Wide Web Consortium (W3C) and Internet Engineering Task Force (IETF) standards such as Extensible Markup Language (XML), HTTP, and Domain Name System (DNS) protocols. Additionally, the UDDI specification addresses cross platform programming features by adopting the proposed SOAP messaging specifications formalized by the W3C.	http://www.uddi.org
System Services	XHTML	XHTML 1.0 is the first major change to HTML since HTML 4.0 was released in 1997. It brings the rigor of XML to Web pages and is the keystone in W3C's work to create standards that provide richer Web pages on an ever increasing range of browser platforms including cell phones, televisions, cars, wallet sized wireless communicators, kiosks, and desktops.	http://www.w3c.org/MarkUp/
System Services	DOM	The Document Object Model (SOM) is a platform- and language-neutral interface that will allow programs and scripts to dynamically access and update the content, structure and style of documents. The document can be further processed and the results of that processing can be incorporated back into the presented page.	www.w3c.org/dom
System Services	IEC TR 14471	Software Engineering -- Guidelines for the adoption of CASE tools	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=80
System Services	IEC 14750	Open Distributed Processing -- Interface Definition Language	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=80
System Services	IEC TR 14471	Software engineering -- Product quality -- Part 1: Quality model	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=80
System Services	IEC 14752	Open Distributed Processing -- Protocol support for computational interactions	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=80
System Services	IEC 14769	Open Distributed Processing -- Type Repository Function	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=80

TRM Category	Standards Reference Designation	Standards Description	Web Site Link
System Services	IEC TR 15846	Software life cycle processes -- Configuration Management	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=80
System Services	IEC 9075-4	Database languages -- SQL -- Part 4: Persistent Stored Modules (SQL/PSM)	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=60&ICS3=
System Services	IEC 9075-5	On-Line Analytical Processing (SQL/OLAP)	http://www.iso.org/iso/en/CatalogueListPage.CatalogueList?ICS1=35&ICS2=60&ICS3=

3.3.8 Other Applicable Standards

TRM Category	Standards Reference Designation	Standards Organization	Standards Description	Web Site Link
Communications Services	DICOM	ACR-NEMA	Digital Imaging and Communications in Medicine (DICOM) is an industry standard sponsored jointly by ACR (American College of Radiology) and NEMA (National Electrical Manufacturers Association). It's purpose is to provide a standard method for transferring images and associated information between devices produced by different vendors, which also support a variety of digital image formats. The current version is version 3.0.	http://medical.nema.org/dicom/2001/01_01PU.PDF
Security Services	NSTISSI-1000	NSTISSI	National Information Assurance Certification and Accreditation Process (NIACAP): Minimum standards for certifying and accrediting national security systems.	

4. Summary of VA Best Practices

4.1 Best Practices Governance Process

Anyone within the VA community, with access to the VA intranet, may submit a process description for consideration as a best practice.

- The Office of the Chief Architect solicits best practice recommendations as part of the semi-annual technical standards assessment process;
- Project developers will be asked to assess existing best practices and to share their own best practices during the prototype, full-development, and deployment phases of their projects development.

Once received, the proposed best practice is then:

- Posted within the TRM web site for comment by the VA technical community;
- Reviewed with comments by the Enterprise Architecture Council; and
- Approved or rejected by the Information Technology Board.

Candidate best practices are listed within the VA Standards Profile as "Proposed" with a submission date until they are adopted by the ITB. After approval by the ITB, the best practice is listed as "Approved" with an approval date.

4.2 Origins of VA Best Practices

VA Best practices may be derived from commercial best practices, VA project experiences or the published recommendations of other agencies.

Many best practices are derived from Standards Organizations and from IT product vendors.

VA organizations which are part of the IT governance process, (such as Cyber Security, Program Management Oversight Office, or the Office of the Chief Architect) may designate certain best practices as "Mandatory" with the approval of the Information Technology Board.

4.3 VA Best Practices, ordered by Authoritative Source

The following best practices should be considered as draft because they have not yet been approved by the process just described. That is, they have not yet been approved by the EAC or ITB.

4.3.1 Cyber Security Best Practices

TRM Category	Best Practice Category	VA Best Practice Designation	Best Practice Description
Security	Security	Identification	Authorities can use identification documents to validate a user's identity, generally in conjunction with personal presence.
Security	Security	Authentication	Many methods are used to provide authentication; some depend on cryptographic techniques and others do not. The use of a public key system solves many of the authentication and encryption issues associated with i-commerce.
Security	Security	Access Control and Authorization	Best Practice • Operating systems provide access control for all information stored or processed • Operating systems provide access control for all information stored or processed • SSL can provide for fine-grained access cont
Security	Security	Accountability	Identification systems assist in providing accountability of users and their actions and are supported by establishing a public key infrastructure, digital signature, and enterprise-wide directory services.
Security	Security	Data Integrity	Encryption techniques directly address the security issues surrounding data privacy, confidentiality, and data integrity. Encryption technology is also employed in digital signature processes, which address the issues of authentication and data integrity.
Security	Security	Non-Repudiation	Non-repudiation is supported through the use of digital signatures. Digital signatures are used to sign email and digital transactions, enabling users to exchange information.
Security	Security	Availability	There are several practices and products that provide availability capability. The best solution is dependent upon the criticality of the information on the system.
Security	Security	Confidentiality / Data Encryption	Encryption is utilized in numerous information protection mechanisms and in infrastructure components required to support these mechanisms, such as data at rest encryption, E-mail encryption, and World Wide Web (WWW) encryption.
Security	Security	Malicious Code Detection	To protect systems from the threat of malicious or improper use of mobile code: • Assess and control the risks imposed by the technology • Disable the execution of unsigned mobile code obtained from outside the enclave boundary
Security	Security	Auditing	Implement audit mechanisms to detect unauthorized use and to support incident investigations. Audit log files should be generated for all security-related events. Monitor, record, and periodically review audit logs to identify unauthorized use.

4.3.2 IETF Best Practices

TRM Category	VA Best Practice Designation	Best Practice Description	Web Site Link
	IETF-001	Best Current Practices	1818
	IETF-002	Addendum to RFC 1602 -- Variance Procedure	1871
Communications Services	IETF-003	Variance for The PPP Compression Control Protocol and The PPP Encryption Control Protocol	1915
	IETF-4	An Appeal to the Internet Community to Return Unused IP Networks (Prefixes) to the IANA	1917
	IETF-5	Address Allocation for Private Internets	1918
	IETF-6	Guidelines for creation, selection, and registration of an Autonomous System (AS)	1930
	IETF-7	Implications of Various Address Allocation Policies for Internet Routing	2008
	IETF-8	IRTF Research Group Guidelines and Procedures	2014
	IETF-9	The Internet Standards Process -- Revision 3	2026
	IETF-10	IAB and IESG Selection, Confirmation, and Recall Process: Operation of the Nominating and Recall Committees	2727
	IETF-11	The Organizations Involved in the IETF Standards Process	2028
	IETF-12	Internet Registry IP Allocation Guidelines	2050
	IETF-13	Multipurpose Internet Mail Extensions (MIME) Part Four: Registration Procedures	2048
	IETF-14	Key words for use in RFCs to Indicate Requirement Levels	2119
	IETF-15	Deployment of the Internet White Pages Service	2148
	IETF-16	Selection and Operation of Secondary DNS Servers	2182
	IETF-17	Use of DNS Aliases for Network Services	2219
	IETF-18	IETF Policy on Character Sets and Languages	2277
	IETF-19	IANA Charset Registration Procedures	2978
	IETF-20	Classless IN-ADDR.ARPA delegation	2317
	IETF-21	Expectations for Computer Security Incident Response	2350
	IETF-22	Guide for Internet Standards Writers	2360
	IETF-23	Administratively Scoped IP Multicast	2365
	IETF-24	RSVP over ATM Implementation Guidelines	2379
	IETF-25	IETF Working Group Guidelines and Procedures	2418
	IETF-26	Guidelines for Writing an IANA Considerations Section in RFCs	2434
	IETF-27	Advancement of MIB specifications on the IETF Standards Track	2438
	IETF-28	Enhancing TCP Over Satellite Channels using Standard Mechanisms	2488

TRM Category	VA Best Practice Designation	Best Practice Description	Web Site Link
	IETF-29	Procedure for Defining New DHCP Options	2489
	IETF-30	Anti-Spam Recommendations for SMTP MTAs	2505
	IETF-31	Media Feature Tag Registration Procedure	2506
	IETF-32	Reserved Top Level DNS Names	2606
	IETF-33	URN Namespace Definition Mechanisms	2611
	IETF-34	Changing the Default for Directed Broadcasts in Routers	2644
	IETF-35	Registration Procedures for URL Scheme Names	2717
	IETF-36	Guidelines for Writers of RTP Payload Format Specifications	2736
	IETF-37	IANA Allocation Guidelines For Values In the Internet Protocol and Related Headers	2780
	IETF-38	Network Ingress Filtering: Defeating Denial of Service Attacks which employ IP Source Address Spoofing	2827
	IETF-39	Charter of the Internet Architecture Board (IAB)	2850
	IETF-40	Root Name Server Operational Requirements	2870
	IETF-41	Congestion Control Principles	2914
	IETF-42	Domain Name System (DNS) IANA Considerations	2929
	IETF-43	Procedures and IANA Guidelines for Definition of New DHCP Options and Message Types	2939
	IETF-44	Use of HTTP State Management	2964
	IETF-45	IETF Discussion List Charter	3005
	IETF-46	Recommended Internet Service Provider Security Services and Procedures	3013
	IETF-47	Tags for the Identification of Languages	3066
	IETF-48	End-to-end Performance Implications of Slow Links	3150
	IETF-49	Delegation of IP6.ARPA	3152
	IETF-50	End-to-end Performance Implications of Links with Errors	3155
	IETF-51	IANA Guidelines for IPv4 Multicast Address Assignments	3171
	IETF-52	Management Guidelines & Operational Requirements for the Address and Routing Parameter Area Domain	3172
	IETF-53	GLOP Addressing in 233/8	3180
	IETF-54	IETF Guidelines for Conduct	3184
	IETF-55	Guidelines for Evidence Collection and Archiving	3227*
	IETF-56	On the use of HTTP as a Substrate	3205*
	IETF-57	IANA Considerations for IPv4 Internet Group Management Protocol (IGMP)	3228*
	IETF-58	Defining the IETF	3233*